

Riina Hämäläinen
Syventävien opintojen tutkielma
Kulttuuriperinnön maisteriohjelma
Humanistinen tiedekunta
Helsingin yliopisto
Toukokuu 2020



Tiedekunta – Fakultet – Faculty Faculty of Arts		Koulutusohjelma – Utbildningsprogram – Degree Programme Master's Programme in Cultural Heritage	
Opintosuunta – Studieriktning – Study Track Archaeology			
Tekijä – Författare – Author Riina Hämäläinen			
Työn nimi – Arbetets titel – Title Gender Matters – Materialcultural theory of sexgender in mortuary archaeology			
Työn laji – Arbetets art – Level Master's thesis	Aika – Datum – Month and year May 2020	Sivumäärä– Sidoantal – Number of pages 88	
Tiivistelmä – Referat – Abstract <p>The sex/gender model used in biological archaeologies to investigate human remains and past lives is one that relies on the epistemological and ontological separation of sex and gender. Despite this separation the model ends up treating these concepts synonymously due to the taken-for-granted binary nature of sex which in a deterministic manner eventuates into an equally binary gender. This thesis develops a theoretical framework for an archaeological concept of gender that operates without the division, binarism and determinism implicit in the sex/gender model. Pursuing answers to the questions whether it is possible to approach both sex and gender in archaeology in a nonbinary way, and if so, what is an archaeologically feasible alternative, it seeks to devise a method to approach sex and gender in mortuary archaeology beyond the deterministic binary.</p> <p>This thesis is firmly theory-oriented and the writings of various authors within the discipline of archaeology, feminism and queer studies comprise the necessary material. The theories pertaining to the field of feminism are intersectionality and queer theory, which eschew normativity and essentialism and call for gender diversity. Respective to archaeology, the theories influencing this thesis derive from new materialisms to whom the rejection of divisions and dichotomies is characteristic. In this regard, of particular note are the writings of new materialist and feminist theorist Karen Barad. Applying her theories concerning the relational, entangled and mutually constitutive nature of matter and meaning to the topic of sex and gender is central in devising a nonbinary new materialist perspective to be used for the purpose of a more open and inclusive mortuary archaeology.</p> <p>This thesis reveals that the dualistic division between nature and culture has resulted in a separate conceptual development and different strategies of engagement concerning sex and gender. The reason why sex is seen as a biological fact and gender as a cultural meaning proves false when both are affected equally by nature and culture, with the body serving as a nexus-point in which these two forces converge. Applying Barad's insight reveals that binary sex is not an inherent quality of the body, but one that is produced through a scientific biomedical apparatus. Sex and gender exist in a state of inseparability when undetermined, but when subjected to a determination process, they become mutually exclusive phenomena, thereby disrupting sex-to-gender determinism. In their separate state, both are constitutive of matter and meaning, which is why gender made determined through intersectionality can be used to study gendered understandings through the materiality of the body, exempt from binary views.</p> <p>Analysing a topical bioarchaeological publication concerning a female Viking warrior through the approach that does not depend on the sex binary reveals that a scientific biomedical apparatus is subject to criticism on multiple fronts. Though the case study should be credited with rejecting gender role stereotypes, it demonstrates determinism and binarism as well as homogeneity and universalism in terms of categories. Failing to imagine possibilities beyond a fixed binary also results in the exclusion of alternate ways of knowing and being. The open-ended approach proposed in this thesis not only seeks to grant these possibilities opportunities to exist, but counsels cognisance towards the exclusions apparatuses enact. Embracing speculation, it also holds ambiguity and vagueness to be meaningful qualities pertaining to gendered archaeology. Regarding the mortuary setting, binary sex determinations need not be abandoned, but they should be used alongside this nonbinary approach.</p>			
Avainsanat – Nyckelord – Keywords gender, sex, mortuary, archaeology, feminism, new materialisms, theory, speculation			
Säilytyspaikka – Förvaringsställe – Where deposited HELDA - Helsingin yliopiston digitaalinen arkisto / HELDA - Helsingfors universitets digitala publikationsarkiv / HELDA - Digital Repository of the University of Helsinki			
Muita tietoja – Övriga uppgifter – Additional information Ohjaaja – Handledare – Supervisor Marko Marila			

Contents

1	Introduction.....	1
1.1.	Combining gender, matter, archaeology, theory and feminism.....	1
1.2.	Aims of the thesis.....	5
1.3.	Structure of the thesis	6
1.4.	What's in a name: some necessary ruminations concerning terminology.....	8
2	A brief history of the sex and gender divide.....	11
2.1.	Nature and culture: the grand divide	11
2.2.	Making waves: feminist development and the concept of gender	14
2.3.	The adoption of gender into archaeology and the specification of the gender field ..	23
3	Sex and gender in sciences and biological archaeologies	29
3.1.	Researching sex and gender through biological archaeologies	29
3.2.	The historicity and multiplicity of sex.....	36
3.3.	The body as a materialcultural nexus	42
4	Sexgender as a phenomenon.....	47
4.1.	Karen Barad's phenomenal entanglements.....	47
4.2.	Intra-section of material forces	54
5	Gender and the mortuary setting	59
5.1.	On binarism, determinism and intersectional variation in the mortuary setting.....	60
5.2.	Identifying nonbinary gender and fluidity in the archaeological record	66
5.3.	Traces relating to gendered practice and the ethics of speculation and exclusion.....	73
6	Conclusion	84
	Bibliography.....	89

1 Introduction

Gender theorist Judith Butler has stated that imagining what is possible lies at the heart of any theory (2004, pp. 175–176). With regards to archaeology, there can be no question regarding the necessity of such an imaginative enterprise, whose usefulness extends from offering frames of reference for archaeological practice to cultivating critical thinking and broadening interpretative horizons by providing food for thought (Yoffee & Sherratt 1993, p. 2, p. 6). Though within archaeology theories are, at times, deemed a necessary evil, especially as they can take things too far into abstraction, making the approaches challenging to implement and no longer practically applicable, the need for them has not lessened. This is especially so when it comes to sex, as this category informed by scientific thought and perceived as being fundamental has not been conceived of being receptive to cultural variation outside the bounds of feminist discourse (Butler 2004, p. 43, p. 224). However, a confluence of social theory and material concerns that has been underway for some years within the discipline is promising with regards to the study of sex as well as gender, paving way for novel perspectives for both concepts (Sofaer 2011, p. 286). These changes have arrived in the wake of archaeology's interest towards multi-disciplinary approaches that have also implicated philosophical, political and ethical questions (see for example Witmore 2014; Agarwal & Glencross 2011). The resultant 'ontological turn' and the subsequent movements subsumed under new materialisms have not only returned archaeologists to their roots towards all things material but are also well situated to attune themselves to issues concerning gender (Marshall & Alberti 2014). The reasons for this are to do with the entanglement of the material and the social and the renouncement of the dividing line between nature and culture. With these novel influences, the concept of gender in archaeology is due a transformation – the undoing of both gender and sex for the purpose of making them anew.

1.1. Combining gender, matter, archaeology, theory and feminism

At first glance, bringing together gender and matter with archaeology may seem like a tall order. With regards to such an objective, feminist theories seem like the most suitable place to look to for inspiration due to feminism's penchant for the realm of gender. Among the many theories of feminist and social studies concerned with contemporary power inequalities and populations of a more modern persuasion, there exist a few whose principles are well suited and applicable to an archaeological study of gender. The new materialist turn in particular, calling for a theory

for the material body that allows for ‘lived experience, corporeal practice and biological substance’ to be taken under the scope of investigation together (Alaimo & Hekman 2008, p. 4), proves promising in this regard, as it seems to share in archaeology’s ongoing interest with matter. Though for the most part postmodern thought has prevailed regarding feminist writings on gender, within the novel fields of new materialisms, the focus is turned towards both gender and sex, especially within the branch of new materialisms that deal with the relational ontology of matter. These concerns happen to align well with archaeology, with its unique, materially-inclined dataset well situated to investigate materialities from different, even contradictory, angles, objects being understood on one hand as relational, on the other as withdrawn (see Harman 2013).

For the most part, the notable advantages brought on by an alliance with feminism and archaeology have not been overlooked by gender archaeologists, who have been engaged in cross-disciplinary work for well over a decade (see for example Conkey & Spector 1984; Hays-Gilpin 2004; Hollimon 2006; Nelson 2006; Alberti 2006; Brumfiel 2006; Dommasnes & Montón-Subías 2012; Alberti & Danielsson 2014; Dommasnes 2014). Considering the phases of development undertaken by archaeology as a discipline, its foundation as a field of humanities that has since expanded to encompass a full scope of scientific approaches (see for example Harris & Cipolla 2017; Fahlander & Oestigaard 2004; Sørensen 2017a), this sort of appropriation of theories and methods is in no way uncommon. In fact, it is clear that through the years owing much to the contributions of feminist-inspired scholarship, including queer theory, the understanding of gender in archaeology has indeed been enriched. However, despite rising interest towards combining bioarchaeological and gender informed feminist approaches (see for example Sofaer 2006; Geller 2005), and the critique towards the limitations of traditional sex analyses, especially with regards to their employment in mortuary settings (see for example Arnold 2016; Stratton 2016), feminism remains somewhat untapped as a resource outside the field of gender archaeology. Despite the fresh perspectives introduced by the ontological shift, archaeology does not extensively engage with feminism, as Yvonne Marshall and Benjamin Alberti (2014, p. 19) have come to recognise. This is an evident weakness, especially, as new material feminist Karen Barad’s (2007) agential realism, the relational onto-epistemology of being and knowing and the various entanglements of matter and meaning have made it through to other disciplines, though they are no less suited to be applied to archaeology.

It is therefore clear that the advantages of multidisciplinary approaches that enrich one's field of study by offering new perspectives and holistic ways to comprehend one's research subject have not been wholly realised, because gender theories, especially feminist ones, remain on the fringe of mainstream archaeological practice. This is especially true in many studies with a premise in bioarchaeology where dichotomies between mind/body and culture/nature seem to rule supreme (with nature usually taking precedence) and where the divide between the sciences and the humanities persists. In this frame of reference, the binary sex/gender model has become so deeply integrated in archaeology it is hardly ever questioned and being an unspoken given, it is likely to remain that way (Weismantel 2013, p. 322). The sex/gender model, where the dichotomy that separates matter and sets it apart from meaning is implicit in its very theoretical foundation, might seem like a pragmatic and relatively reasonable compromise between two parallel but discrete concepts. Upon closer inspection, however, it proves quite troublesome. On both sides of the division we find an opposing position, which fight for supremacy over the other. When gender is the victor, culture imposes meaning to nature, and because gendered approaches rarely quit the sphere of discourse, remaining aloof with regards to material concerns and practical scientific applications, matter is neglected (Fredengren 2013, p. 53). The disengagement of matter from gender, effectively trivialising its impact, is exactly where gender archaeology has been found wanting. As bioarchaeologist Joanna Sofaer (2006, p. 3, p. 9) has stated, it is somewhat odd that even as the body, its sex and age, generate insight about material culture, the body itself, even though it stands aptly situated connecting both biology and culture, is neglected and not utilised to its maximum potential as a source for interpretation.

Unfortunately, the other side of the divide fares no better in comparison and is equally subject to criticism on account of reducing gender to a normative binary form. Despite the common misunderstanding that with the implementation of the sex/gender model with its inherent separation, the problems of equating gender with sex are laid to rest, far from leaving behind the dreaded determinism, it has insidiously saturated the field entire. This can be traced to a general apathy towards nature and a lack of willingness to address it, which has left it out of the theory loop. Left to its own devices, the model, in effect, has been rendered unproblematised, and its use thus continues the tradition of implicitly tying gender down to sex. The normative binary also implicit in the sex/gender model results in any kind of gender variance to be either overlooked or "queered" by default when measured against a heteronormative system that understands categories as fixed, ahistorical and universal. This mentality and biomedical form of address is reproduced in the way mortuary data is investigated.

The mortuary setting, though a very readily engaged arena in archaeology, has certainly suffered its fair share of problems relating to the sex/gender model. A very central one has been the taken-for-granted expectation that patterns are attributable to differential treatment according to biological sex that directly equals gender. However, if gender is deemed separate from sex and worthy of consideration on its own, it becomes subject of enquiry only when anomalous configurations of grave goods are encountered. Consequently, when determinism, essentialism and a fixed binary is perpetuated in how gender is interpreted through the mortuary setting, perspectives that might prove more inclusive, and which could significantly alter the course of the interpretation are left unentertained. Despite the difficulties of connecting theory and practice in archaeology (Yoffee & Sherratt 1993, p. 3, p. 5; Kohl 1993, p. 15; Jorgensen-Rideout 2017, p. 1), it is essential that this bridge is gapped in order to address the problems of the sex/gender model. In Sofaer's words:

We need to consider gender otherwise we run the risk in archaeology either of falling back into biological determinism, or of cutting ourselves off completely from the possibility of accessing the full range of potential ways that differences between bodies may be socially regulated and understood. (2006, p. 99)

In their reconciliation between matter and meaning, what current approaches in feminism therefore call for is matter without determinism (Sofaer 2006; Marshall & Alberti 2014; Barad 2007). On a similar note, as has been suggested by Alison Wylie (2007, p. 210, p. 213), what archaeology needs is a transformed conception of gender without the essentialism that so far has served as a key component in gendered analyses. However, this necessary alliance and the omission of ill-desirable attributes cannot happen so long as the nature/culture divide is maintained, and the restrictive and stagnant boundaries of dualism are in place (Palsson 2013, p. 248). As the impasse that the sex/gender model presents can only be overcome by renouncing the split, the focus must be turned towards bringing the concepts of sex and gender together (see for example Joyce 2007; Fuglestad 2014; Alberti 2006). Furthermore, as suggested by Christina Fredengren (2013, p. 54) this unification should happen, not just in a mutually beneficial but a *transformative* way. This sort of rethinking of the concepts is also evident in the writings of the bioarchaeologists who argue against the onset division of individuals into either male or female category (Agarwal 2012; Wilkie & Hayes 2006; Geller 2008; 2016). While not numerous, they give voice to the claim that two simplistic categories are ill-suited to convey the dynamism of gendered experience.

Utilising a feminist informed gendered archaeological framework that draws from new materialisms, a novel account of archaeological gender emerges, which is better equipped to combine biology and culture while not denying or downplaying the impact and the influence of either (for example Rosario 2009; Geller 2005; Fausto-Sterling 1992; 2000). However, in order to address the complexity relating to social categories it is also important to turn to intersectionality. Intersectional theories are all the rage within feminist academic circles, and their advantage to the study of gender is tantamount; they deal with gender diversity allowing for the plurality of gender manifestations to emerge when intersected with other social positions, or as Christine Bose terms them ‘intersecting axes of differentiation’ (Bose 2012 as cited in Anthias 2012, p. 127). It is in these intersections that gender operates therefore altering its expression from one intersection to the next (Arnold 2016, p. 850). It follows, that intersectional approaches are well suited if gender is to be considered plural but seeking to employ intersectionality while still maintaining the sex/gender model makes the approach superficial, merely skin-deep. To move beyond this point, it becomes ever more crucial then to dismantle the dichotomy between sex and gender and the sex/gender model. A new transformative concept of gender that embraces both ambiguity and complexity, is able to account for both biology and culture and the entanglement of matter and meaning, is an approach that is integral when seeking to study people, be it in the past or the present.

1.2. Aims of the thesis

This thesis focuses on developing a theoretical framework for an archaeological concept of gender, which in place of the sex/gender model prevalent in biological and mainstream archaeology, suggests the use of an alternative approach informed by feminist and queer theories. The purpose of this thesis is therefore to answer the following questions: is it possible to approach both sex and gender in archaeology in a nonbinary way by adopting theories of feminist new materialisms, and if so, what is an archaeologically feasible alternative for the sex/gender model? Consequently, an additional query arises, which seeks to answer the question, how is sex and gender to be approached in archaeology, without the division, binarism and determinism implicit in the sex/gender model. Of particular concern here is the mortuary setting, where the use of the sex/gender model is deeply rooted. Drawing from the writings of archaeologists and established feminist theorists, Karen Barad in particular, this thesis contributes to the ongoing theoretical discussion pertaining to the ontological turn happening

within archaeology. The writings presented by these various authors therefore comprise the material for this thesis, which is similarly theory-oriented in nature, building on these theories and applying them to the topic of gender. Though theories attributed to new materialisms form the bulk of the material, committing to a new materialist approach alone is not enough considering the intersectional and diverse nature of gender. This is why a new materialist Baradian perspective will benefit from feminist intersectional insight, allowing for the diversity present in materiality of gender to manifest. For that matter, focusing on materiality will also situate this concept of gender firmly within an archaeological framework.

While recognising the necessity of studying gender in a comprehensive manner, which refers to the use of multiple lines of evidence from different fields, this thesis focuses on giving an in-depth account of archaeological bodies and the mortuary setting. Therefore, iconography and the interpretation of anthropomorphic imagery, for example, will not be considered even though it is recognised that these form an important part of gendered approaches. In addition, it is not the aim of this thesis to give an in-depth account on molecular or osteological methodology pertaining to sex determination. Interested parties can find better equipped accounts of these elsewhere. Furthermore, though items are paid cursory attention, as they are part of the mortuary assemblage, this thesis does not emphasise the objects that in mortuary contexts are associated with sexed bodies. Rather, the bodies themselves and bodies interacting with the environment, of which objects are a part, provide the material for this theoretical endeavour.

1.3. Structure of the thesis

In the following chapter, I explore what sex and gender are by delving into feminist and archaeological epistemologies and ontologies, as the development within this field reflects how the study of gender has been approached through the years. In the first section, drawing upon the theoretical perspectives of the new ontological movement that holds with renouncing the dualism between nature and culture, the origins of the sex/gender model and the division behind it are explored. Following this, I examine the ways in which the notion of gender has evolved and changed within feminist thought, and moving further, what this and the sex/gender model has meant for the archaeological study of gender.

In chapter three, having situated the sex/gender model within a wider context of dualism, the focus is turned towards examining how the sex/gender model has influenced and guided

biologically-inclined archaeological enquiries into sex and also, as it turns out, gender. While raising some key problems concerning sex determination, the aim is to target the binary assumptions that deal with gender in the past, which not only use sex and gender synonymously, but only turn to consider gender when the assumed binary fails. After emphasising the disadvantages of using the sex/gender model to guide analyses and interpretations, discussion turns towards the historicity and multiplicity pertaining to sex. Looking first at some scientific understandings then social theories, the multiplicity of sex is investigated and sex as a fixed property of the body is brought into question. Here, it is demonstrated that sex is far more than a scientific, natural and objective category, but that matter has the means to enable all kinds of meanings and therefore also the bodily quality we call sex can be interpreted in varying ways. Through showcasing the historicity of sex, and its multiplicity based on the very same scientific understandings that often are used to postulate its binary nature, sex is presented in a very different light. Upon closer inspection, it is revealed that just as sex is a construction, gender is material. As we turn to developmental systems theory and the theory of biosocial becoming, that understand nature and culture to mutually affect one another, it is revealed that the environment is imbued in the material and the materiality of culture finds itself manifested in the materialcultural body.

Chapter four in many ways forms the focal point of this thesis in which the theories most pertinent to the topic will be discussed, mainly Karen Barad's agential realism. I introduce ways sex and gender could be approached with regards to archaeology, implementing theories of both new materialisms and other feminist theories such as intersectionality and queer theory. In this section, the relational relationship between sex and gender is made explicit, and the convoluted entanglements between them exposed, making it evident that all things material are connected with the abstract, that there is no inherent division between matter and meaning and nature and culture. Gender as a materialcultural phenomenon, which intra-sects with other phenomena emerging differently through the intersection, is studied using an intersectional approach.

Chapter five serves as the discussion section of this thesis. With the insight gained from the previous chapters, it is examined how gender should be addressed and studied in archaeology, when the sex/gender model is omitted. Employing the understanding of sex and gender through the inseparability of matter and meaning, and the diversity and mutability of gender, while also bringing ambiguity and vagueness to the fold, the investigative senses are turned towards the mortuary setting. As the purpose of this thesis is to present an archaeologically serviceable

concept of gender which is able to traverse the field from theory to practice, the use of a case study will aid in this regard. Throughout this chapter an article published under the title ‘A female Viking warrior confirmed by genomics’ (Hedenstierna-Jonson et al. 2017) will be analysed from the perspective presented in this thesis. This goes a ways towards deconstructing current scientifically-oriented and biology-inspired archaeological practice in terms of its treatment concerning gender. By underlining the mutually constitutional nature of sex and gender it is hoped that archaeological approaches that pertain to sex will come to present themselves in as variable forms as the study of gender. This constitutes the heart of this thesis.

In chapter six the research questions and central arguments are pondered and weighed together with the results bringing the thesis to a conclusion.

1.4. What’s in a name: some necessary ruminations concerning terminology

Before venturing further into the realms of sex and gender, it behoves us to turn our attention briefly to terminology in order to gain a common frame of reference to better aid comprehension. First of all, a term often referred to throughout this thesis and thus in need of some clarification is new materialisms. This posthumanist theoretical movement that has influenced thought across disciplines for some time, has come with a novel array of perspectives from which to consider things and the complex assemblages of which things are a part (see more from Witmore 2014). The very term, new materialisms, invokes a sense of plurality, and for a reason, because the movement contains a variety of different approaches. One subsumed under its rubric can be termed relational new materialisms, which are concerned with the relational nature of meanings and things. In addition, new materialisms are often allied with the “speculative movement”, a similarly heterogeneous assortment of different philosophies that reject anthropocentrism and highlight open-endedness and uncertainty when it comes to knowledge production (Koložova & Joy 2016). Among the leading authorities in relational new materialisms and speculative feminism is Karen Barad (2007), whose unification of ontology and epistemology into onto-epistemology conveys well what different new materialist approaches tend to have in common. As Barad’s onto-epistemology holds that the ways to know the world are intimately related to how the world is, there is no separating the two concepts priorly seen as being divided. The tendency of new materialisms is therefore to eschew simple divisions, dualisms, reductions and causations, especially those between human and non-human and nature and culture, which have characterised much of prior thinking within the humanities.

As new materialisms do not privilege humans above non-humans and other things, but consider them equal though different, much of the strength of the movement has to do with rethinking and reformulating vital concepts and categories. As voiced by Ian Hodder (2014, p. 228), this return to matter is divorced from a return to determinism, a statement which happens to carry a certain momentum considering the topic of this thesis.

Terminology directly pertinent to gender deserve clarification as well, for different meanings can confound the unsuspecting reader. When perusing through publications that touch on gender, it is unavoidable to steer clear from the concept of sex and the uneasy relationship between these two concepts that can be reduced to that of nature versus culture, body versus mind and matter versus abstraction. How gender and sex are understood vary depending on different research traditions, and the meanings are not self-explanatory, as will be discussed in the following chapters. Therefore, as is customary in papers that deal with gendered issues to define all relative terminology, in this thesis when the terms male and female are used it is with reference to bodily difference, in as much as the morphology due to secondary sexual characteristics allows. Gender, in turn, is used to describe social difference and the terms man and woman are sometimes employed to that effect, when found suitable. Though conflating the concepts sex and gender in terms of regarding them as synonymous is not advised (see for example Walker & Cook 1998), especially when considering their laden history and the singular characteristics pertaining to each concept, the division between these, is, however, very much a false dichotomy. It can be argued that to use these terms at all is problematic, as the terms themselves are founded on the premise of the separation of nature and culture, which is why their use maintains and affirms the division according to which sex is considered to be stable and an objective truth of the body and discernible through biomedical means, while gender as a social construction belongs to the world of discourse far removed from the material world. However, there is a way to circumvent the issue, as will be demonstrated later on.

It is also worthwhile to note, that in this thesis it is opted to use the term *sexgender* to convey the togetherness of biological and cultural effects and the mind and the body instead of a term such as 'sexe' to supplant both sex and gender favoured by Fuglestad (2014). Similar to *sexgender*, the non-hyphenated term 'materialcultural', also favoured by Barad (2007) is chosen, because it brings to the fore the indistinction between these two concepts, which is central to this thesis. This is done firstly, for the reason that established terms carry a certain momentum, a recognised significance. Secondly, because ousting previously established terms

with another is a tricky business and sometimes a doomed enterprise. Furthermore, as stated by Marshall and Alberti (2014, p. 23) all the previous intellectual work done pertaining to the term can become disconnected, when another term is used. Rather than omitting the terms sex and gender due to the problems that accompany them, and alongside all the important contributions that have been accomplished with regards to them, the concepts can be reformulated and ‘revitalised’ (Marshall & Alberti 2014, p. 23). Lastly, it is necessary to make a distinction between the terms sex/gender split, sex/gender system and the sex/gender model. All are interconnected, but in order to avoid unnecessary confusion, in this thesis the first refers to the conceptual divide between sex and gender while the second refers to the overall binary system, that holds the concepts to be universal, deterministic and normative. The third, therefore refers to the analytical model used to approach both sex and gender in the archaeological record, containing in it the split, as well as the universality, determinism and normativity.

One line of caution must also be exercised in relation to terminology, in particular that which concerns the use of modern monikers of gender diversity in archaeology. It must be understood that terminology has a spatial and a temporal context, a historicity that imbues terms and categories that may seem objective and analytical with meaning and connotations one should aspire to be aware of, if one means to use them. The usage of heavy-baggage terminology may take for granted both the division between sex and gender and that of sexual orientation and gender identity, which can be problematic, as such separation in any given culture should not be a given thing (Stryker & Currah 2014, pp. 303–304). Though it is meritorious to infer and even easier to believe that gender diversity is a quality that transcends time and place, it should not be forgotten that modern terms are imbued with socio-political connotations. As their relevance with regards to social contexts of past societies is questionable and because they lack neutrality, they cannot be considered to be universal definitions to be used without care. Bottom line is, without providing definitions, thereby situating terms laden with meanings in our own cultural context within a new context, it might be prudent to omit them altogether. Though it is beyond the scope of this thesis to properly address the problems of using presentist terminology to bracket people in the past according to identity categories familiar to us in the present, it is important to take into account the problems inherent in using terminology recognisable as being simplifying, presentist and ahistorical; one would therefore seek to caution against using modern terminology to describe past phenomena for fear of misconstruing or misrepresenting them (Matić 2016, pp. 826). These issues are discussed at length by bioarchaeologists Pamela Geller (2016), and interested parties are encouraged to familiarise themselves with her work.

2 A brief history of the sex and gender divide

The history of gender and sex is first and foremost a history of separation, of numerous divisions and sub-divisions. The tumultuous relationship between sex and gender and the dichotomisation of these two concepts and trains of thought can be traced to the wider field of philosophy, as well as to several key developments within the disciplines of feminism and archaeology in turn. These two fields of sex and gender on opposite sides of the division have developed separately, with little discussion between them, with the status quo only recently being called into question in archaeology. This is why this chapter must start with clarifying and situating the division within the discipline through an examination of ontology, epistemology and the divide between culture and nature. Following this, it is necessary to continue on to the inception and adoption of gender and examine its separation from sex, and how this separation came to be. This will be done by studying feminist development. Social categories will also be examined in terms of how they are perceived, constructed and utilised in feminist intersectional thought. From there follows a brief cursory look at gender archaeological thought and how the separation manifests in archaeology as the sex/gender model, and how the sub-division between humanistic and scientific as well as the degree of feminist engagement has led to further dichotomisation regarding gender.

2.1. Nature and culture: the grand divide

Though the Cartesian philosophy of dualism between mind and body may have ended up influencing how sex and gender were conceptualised – one of the body, and the other of the mind, the one dualism significantly affecting the study and conceptualisation of sex and gender is the one between nature and culture. This division, which shares some similarities with cartesian dualism is theorised extensively by Alfred North Whitehead (2013), who argues against such a ‘bifurcation’ between nature and culture, and any kind of dual division of reality into two components. To Whitehead (2013, pp. 30–31) it was futile to understand products of nature and products of the mind, or culture, as divided into nature as a ‘cause of awareness’ and nature that as awareness resides in the mind. By way of a metaphor, the only way to avoid such bifurcation would be through the togetherness of matter and meaning, if nature was construed as being both the warmth and the colours of the sun, as well as the agitated molecules and energies and their numerous relations (Whitehead 2013, p. 29, p. 32). However, despite the

criticism aimed at bifurcation since Whitehead's heyday from the 1920's onwards, the legacy of dualism is such that the rift between culture and nature remains a steep one.

As archaeologists Oliver Harris and Craig Cipolla (2017, p. 28) have posited, archaeological perspectives prior to the ontological turn share this same ontology of dualism. In other words, from a research perspective, what emerges as significant is which side of the divide becomes endorsed at any given time. In all of these previous approaches, whether cultural-historical inductivism or scientific empirism, positivistic processual or interpretative post-processual, a realist or a constructionist position, never is there any doubt concerning the validity of the nature/culture divide itself. This is taken for granted, and the only question is whether team nature or team culture comes out on top. The problems caused by this dualistic thinking and handling of the archaeological record have not gone unnoticed by archaeologists. The false dichotomy based around the division between nature and culture, is problematic especially as it pertains to archaeology, because of our understanding of the world may be very different from others inhabiting other times and places. For the most part, what emerges in the criticism is the uncritical way that dualisms become to be imposed onto the past and their hindering effect on the investigative process. In other words, assuming a dualistic premise means that other ways of viewing the world apart from our own are obscured, thereby obstructing the formation of novel insights about the past (Harris & Cipolla 2017, pp. 5–6, p. 31). As Harris and Cipolla (2017, p. 32) state, dividing the world along dualist lines is not a good rendition even of our own world, where entities blurring, shifting and transforming and all around making a grand mess of things is quite commonplace. As Harris and Cipolla (2017, p. 31) further contend, as long as this dualism is maintained, the past remains out of reach and out of our grasp because we cannot gain a hold on it. As such, recognising difference in the past becomes all the more difficult.

On a positive note, archaeological theory in general has sought to problematise and combat this dualistic thinking and mend the 'fracture' evident between nature and culture by calling for a meeting of minds between the biophysical and the sociocultural (Sofaer 2006, p. xiii, p. 25). Tim Ingold (2013, p.12) who views the division between the two fields as a weakness within the discipline, states that the biophysical side of things would benefit from some of the ideas that come more easily to the other side. Bringing the two together, however, is easier said than done. Since the divide between nature and culture, the research pertaining to them has been characterised by the very thing: not only a heuristic split, but one that bears the hallmark of both

ontology and epistemology (Ghisleni, Jordan & Fiocoprile 2016, p. 769). The significance of this is brought on by Butler (2004, p. 228) who states that only by questioning our epistemological certainties, 'we gain other ways of knowing and of living in the world and expand our capacity to imagine the human'. From an archaeological standpoint this precept certainly resonates as the quest to study cultures distant from us benefits from original venues of thought.

The epistemology of archaeological theory seems to reflect that of the dualism evident in ontology, being similarly characterised by dichotomy. On one side are postmodern epistemologies, an umbrella under which reside the various approaches including post-structuralism that reject the notion of an essential truth, theorising instead that reality as we know it is constructed (Monro 2005). On the other side of the divide lie the epistemologies, such as the one derived from biomedicine, whose understanding of knowledge and how it is to be reached, is centred on science. This clear epistemological rift is displayed by the very qualities we attribute to either field, which are in stark opposition to one another. The division thus continues in the dichotomy between humanistic and scientific, between subjective and objective, between ideology and fact and between constructionist and essentialist ways of knowing. The point here is that an ontology of dualism upholds an epistemology of dualism, which affirms that the only way to know and investigate nature or culture is to accept their division and dual nature. This goes to show that a new relational ontology of being is needed, one of togetherness rather than dualism, that rejects essentialism in order to better support an epistemology of diversity. To take the division a bit further, the rise of scientism in archaeology, with its dependence on objective scientific methods to verify subjective hypotheses gained from humanities' methods seems to reflect archaeology's innate struggle between relative/absolute knowledge, and the esteem accorded to the latter as the more scientific way of doing archaeology, the results of which can be proven reliable beyond question (Sørensen 2017a; Sørensen 2017b; Kristiansen 2017; Fossheim 2017). Thus, the fields of science and humanism have both come to be valued according to the degree of veracity and credence they are held to be able to lend to the field. This is why there seems to be a palpable need to hold onto scientific methods and paradigms and the respect gained through rigorous, objective science while the more humanistic pursuits are attributed with speculation and conjecture and are thus deemed inferior (see for example Yoffee & Sherratt 1993).

Though currently the divide between scientific and humanistic epistemologies seems wider than ever, as science deemed objective is idealised and humanistic speculation is met with a certain amount of aversion, it has been proposed that the two need not continue along divided paths. It has been argued that complementarity, and not dominance should characterise both the methodological and the epistemological field (Sørensen 2017a; Sørensen 2017b; Kristiansen 2017; Fossheim 2017.) It is therefore worrying if the reliance on scientific methods leads to a situation where cultural and social topics are to be studied using only scientific methods, or not studied at all, if science, such as it is, is deemed ill-favoured to answer them (Sørensen 2017a). Though archaeology in general seems to value the scientific pursuits very highly, feminist critique has positioned itself to question the many givens of scientific practice and the unacknowledged assumptions that go with them. This contribution supplied by feminist critique to archaeological theory-building is not ignored, and Norman Yoffee and Andrew Sherratt (1993, p. 2) see it as an ‘important component in modern archaeological discourse’. Yet, it is especially with regards to gender, that the merits of feminism become indisputable, because research which engages sex and gender, but which is fully vested in the use of scientific methods is definable in Uroš Matić’s (2016, p. 810) words as research which lacks ‘gender awareness’. This lack of insight extends to the use of the prevalent sex/gender model, for reasons that will be made clear in chapter three. Now we turn to take a closer look on the development of feminist thought.

2.2. Making waves: feminist development and the concept of gender

Feminism has had a significant contribution to social studies by introducing and adapting the concept of gender, which has been on the forefront of feminist thinking ever since. The origins of the term can be traced to the 1970s, when it was employed to signify various things, but it became a major critical term in feminist scholarship only in 1985, when referred to as a ‘useful category of historical analysis’ by feminist Joan Scott (Weed 2011, pp. 288–291). Subsequently, it has dominated feminist thought to the point of banality, and similar to the situation in the 1970’s, the field is as yet riddled with different definitions as to its meaning. Though the term was not yet in common use during the women’s liberation movement in the late 1960’s, the socio-political revolution was integral in its later adoption by paving the way for new ideas to emerge within the social arena (Spencer-Wood 2011, p. 5, p. 7). As was contrary to public opinion at that time, feminist writings theorised that women were as important and as capable as men, and thus undeserving of both their lesser status in society as

well as under-representation in the sciences (Spencer-Wood 2011, p. 5, p. 7). This suffrage inspired feminist thinking has later been called the first-wave of feminism, and in the fight for women's liberation, a unique female standpoint in comparison to that of males' had to be established in order for women to gain a voice and representation (Laqueur 1990, p. 197).

It is no wonder then, that within this struggle for women's rights, feminism therefore took up the stance of anatomical sexual difference, and the resultant differences of essences between the sexes, and ran with it. However, with the subsequent second wave, the stage was set for a reworking of the concept of sex. With the declaration biology is not destiny as the hallmark of second wave feminism, a split between natural, biological sex and cultural gender was issued, that has since been referred by Virginia Prince (2005, p. 30) as a 'distinction between a life style and genital anatomy'. This underlies the notion that to assume and express a gender, one does not need the genitals to match (see for example Prince 2005, p. 30). This seemingly brought an end to the notion concerning male and female essences manifesting themselves as gender. In feminist philosopher Judith Butler's (1990, p. 9) terms this 'radical discontinuity between sexed bodies and cultural constructions of gender', was less radical in the long run, as a binary gender system was maintained. Thus, the notion that genders could be more than two, and that female to femininity and male to masculinity need not be connected, remained implausibly theoretical, and gender continued to be viewed as a reflection of a bimodal model of sex. This is because second wave feminists, while seeking to liberate gender from the yoke of biological determinism, did not wish to renounce the "reality" of sexed bodies (Alberti 2006, p. 107).

Though the sex/gender system was rarely contested during this time, gender theorist Judith Butler (1988; 1990; 1993; 2004), is among the first to do so, and also one of the first gender theorists to take a serious interest in matter. Butler's criticism centres around the system's tendency to privilege sex as a starting point for culture and for her, the body, as such, does not exist prior to gender. To Butler, there is no a priori biological difference that is then through cultural interpretation given new life as gender. Instead, Butler proposes that binary gender as it manifests in the social roles of men and women, is the reason why sex is also viewed in a similar light. These social roles attributed to women and men function as gender norms that take the form of catalysts to produce sex. Rather than understanding gender as the cultural interpretation of biological sex, her account could be construed as a form of cultural determinism. With the reality of a binary sex as an indisputable truth contested, to Butler there

remains but the option to recognise sex as a cultural construction. In effect, sex becomes a gendered category (Butler 1990, pp. 7–10, p. 154). This does not mean, however, that bodies are denied their existence as material entities and that construction is somehow artificial (Butler 1993, p. x). Instead, bodies only come into being as intelligible ‘through the language we have to describe them’, and it is in this sense that they are constructed (Butler 1998, p. 523). According to Butler (1990, pp. 22–24, p. 151; Brady & Schirato 2011, p. 47, p. 49, p. 55) sex and gender as discursive constructions gain substance through what she has termed ‘a heterosexual matrix of intelligibility’, meaning that a framework of recognisable standards of gender, structured by heterosexuality, regulates how bodies are made sense of. The bodies produced within this matrix require sex and gender to be stable, with femininity inhering in female bodies and masculinity in male bodies. Intelligible bodies are then those where sex, gender, sexual practice and desire coincide and form a relation of strict opposition with regards to the other. According to this matrix then, there are some bodies that cannot be categorised within a binary system. But as these ‘unimaginable’ bodies certainly do exist, they are rendered pathological and unnatural in comparison to the only bodies to receive true recognition – the ones that can be fitted into a binary system (Butler 1993, p. 85; 1998, pp. 530–531). To Butler, it is precisely the bodies that fall outside the matrix of intelligibility, that can be discounted based on their nonconformity to dyadism, that make it possible to see sex categorisation for what it truly is, a construction that could also very easily be constructed according to a different set of rules (Butler 1990, p. 149).

In order for a person to be recognised as a legitimate bodily subject, a convincing gender performance is also required, which refers to a re-enactment and ‘a forced reiteration of norms’ meaning that socially proper actions, gestures, movements and so forth have to be continuously repeated throughout a subject’s lifetime (Butler 1990, p. 34, p. 140; Brady & Schirato 2011, p. 38, pp. 44–45, p. 49, p. 56). This matter of gender performativity constitutes the lifeblood of Butler’s theory. Gender performance not only sustains the binary system but is the very means through which gender is produced and, in turn, sex (Butler 1990, pp. 22–24, p. 151; Brady & Schirato 2011, p. 47, p. 49, p. 55). The crux of the matter of production is this: gender is not something that one has or that one is, but rather what one *does* (Brady & Schirato 2011, p. 138). In other words, a social identity is not determinable or definable in terms of any male or female essence, but activity and so gender by a Butlerian account is *becoming through action* (Butler 1990, p. 112). This seems to be what Enrique Moral (2016, p. 805) means when he says that a person is what they enact through their body. Due to the emphasis placed on action and

performance, though Butler's theories may seem to verge on the abstract, her account of gender is actually effervescent in its materiality, because performance is integral to the notion of gender, and performance as practice has material implications. In other words, in performing their socially accepted roles, social actors are both performing and being transformed materially through the performance. Practice here comprises of the iteration of actions, gestures and movements, which work to produce gender and bring it and the concept of sex into being. As this iteration happens according to a set of rules that are socially established, it must be accepted that gender is governed by social specificity. In Butler's (2004, pp. 9–10) mind it follows, that if we accept gender as a social variable, that has historicity and specificity in terms of context, we must also accept that the construction of the body, its anatomy and sex, is continuous and subject to remaking and reinvention. This, in turn, is plausible if gender is understood to be integral to sex, influencing how matter comes to matter. This, however, does not mean that matter is somehow totally in thrall to culture, culture moulding it any which way. What is going on in the body matters in turn, prompting interpretations. So, even though it has been presented that gendered views and the goings on in the social arena feed into and affect how the body is understood, similar to a feedback loop, matter in terms of the body's capabilities and qualities affects gendered views.

Though Butler has earned a canon status and a permanent place in the feminist hall of fame, there is life beyond Butler. The first two waves, though revolutionary, were the product of their time, and still concerned with binaries, women versus men, such as the traditional sex role theory formed during that time attests (see more from Connell 1996, p. 158). The split between sex and gender originated from the second wave was problematised in mainstream feminist thought only when the critique by black feminism took hold. What ensued was yet another, the third wave of feminism, that resulted in women and the whole sex/gender system to be viewed in a new light. This social critique aimed by black feminism towards prior feminist thinking was pivotal in creating exiting new perspectives, as it brought to the fore the problems inherent in using categories to analyse groups of people. The stable and universalised category of women (and inevitably also that of men) was put into question, with the argument by some that a lack of criticism towards it runs the risk of creating it, alongside an opportune premise for gender oppression – the very thing feminism seeks to eliminate (Butler 2011, p. 13). The third wave feminist theories are therefore expected to include gender in all its variety under analysis so that difference is better taken into consideration in categorical analyses (Nelson 2006, p. 14). Even masculinities were approached from a feminist point of view (see for example Wedgwood

2009; Connell 1996) leading to men being studied as a heterogeneous group with a specific history. Here we can see the shift that gender theory underwent, both in terms of gender's diversification, but also its situatedness relative to other identities. Even within gender theory, gender became just another social variable, no more or less important than all the others. As it was recognised that significant social signifiers in our own modern western culture can gain meaningfulness and prominence through constant attention, and according to Floya Anthias (2012, pp. 128–129) unwarranted *saliency*, the relevance of categories must be subject to interrogation. Any feminist intersectional approach worth its grain of salt should therefore take into account that gender's importance is not a universal constant. To this end, Oyeronke Oyewumi's (1998, pp. 1053–1054) insights on genderlessness are of vital importance, because sex/gender equals a self-fulfilling deterministic loop, and so to invoke gender as an a priori analytical category, and to assume it bears meaning, and then address the practices of men and women without first establishing whether such categories even existed, is to not only naturalise gender but to tie it down to sex. When gender as a category is invoked, it is assumed to be an important factor, but there is a difference whether a category is relevant, or whether a category is used to fit the data into a mould. The issue of a priori categorisation is central, and an approach in accordance with intersectionality is leery towards such a course of action.

This thinking seemed revolutionary considering the category of women had been the very hallmark of feminism, but as it came to be understood, the category was not ahistorical and 'self-evident' (Brady & Schirato 2011, p. 2, p. 30). Despite its seeming usefulness as an analytical tool, there was no distancing gender from essentialist views about womanhood across the board, and as such, its insufficiency when faced with the complexities of social organisation and lived experience, had to be addressed. As women's studies and frameworks deriving from different fields rose to the challenge, a solution presented in the form of intersectionality whose theoretical contribution to social studies has since been vast. (McCall 2005, pp. 1771–1772; Martinez Dy, Martin & Marlow 2014, pp. 448.) Though the term intersectionality was first used by political activist and lawyer Kimberlé Crenshaw (Ludvig 2006, p. 246), the novelty was readily espoused by mainstream feminism. Though the theory of intersectionality can be hard to grasp, a useful way to imagine how social categories depend on each other and exist in relation to one another is through the help of a suitable, if somewhat simplistic, analogy provided by sociologist Ivy Kin (2008). According to this analogy a person is like a cookie with categories forming the raw materials, which in the final product are hard to distinguish by look or by taste. Through the baking process they are interconnected, shaping, affecting and

transforming one another. Social variables then should not be studied apart, as they are produced from within, from the entanglement of social factors.

Because intersectionality understands social categories as being complex, multimodal and inseparably intersecting (McCall 2005, pp. 1771–1772; Martinez Dy, Martin & Marlow 2014, p. 448), one of its great merits lies in its ability to introduce complexity to categories. If for example, age is categorised, it is usually deemed a simple matter of distinguishing between infants, juveniles, adults and seniors, though more classes can certainly be added. This by no means lessens the feel that what we are dealing with is relatively straightforward, and not, as Rom Harré (1991) has pointed out, something far more complicated. Harré's understanding about age as a manifold phenomenon diverging into parallel co-existing dimensions of biological, personal and social conveys well the complexity of what we are dealing with. Hence, age, which is often understood solely from the standpoint of biological chronology, expands to an amalgamation of sorts, where the social and the biological commingle and exist together. This togetherness makes these individuals strands difficult to tell apart as a change in one results in a change in others.

Drawing from the views of various scholars and their research, different intersectional approaches that broadly represent the field of study have been identified by Leslie McCall (2005; see alternative approaches from Naples 2009, pp. 568–570) by their unique and differing attitudes towards categories and how they should be understood and utilised. *Intercategorical complexity* or 'the categorical approach' utilises existing categories and groups they contain strategically, comparing them according to a chosen point of interest to reveal variation within and between (McCall 2005, pp. 1784–1787). According to McCall intercategory approaches focus on many groups and compare differences while trying to recognise the social conditions such as the gender system that enable them. They understand categories as fixed to the point that discrete analyses and comparisons become possible, and because they have been influenced by positivist philosophies of science, their techniques can be quantitative (Martinez Dy, Martin & Marlow 2014, p. 455). According to the categorical approach, each analytical category consists of multiple groups, and as more and more categories are added, the number of different groups rises respectively. Another approach that McCall (2005, p. 1774, p. 1780, pp. 1782–1783) terms *intracategorical complexity* retains criticality towards categories but does not outright reject them. Categories are seen as being important, but scepticism should be exercised in the categorisation process, lest classifications become homogenous generalisations incapable

of conveying complexity. The word *intra* is quite telling, as difference is understood to reside and emerge within a category.

In the wake of intersectionality, the sex/gender dichotomy became a thing of the past (Ludvig 2006, p. 246). Or so it was, at least, in the realm of feminism, which now sought to recognise difference beyond the binary (Butler 2011, p. 19). The post-structuralist thought of Butler found an outlet in queer theory (Fotopoulou 2012, p. 25), which also coincided with the 1990's rise of intersex activism, and the 'transgender liberation movement' already begun a decade earlier (more from Jeffreys 1997). In short, queer theory sought to challenge normative views and the normalisation of the gender binary masquerading as universal truths, according to which no other genders beyond male/man and female/woman are recognised (Robert 2014, p. 24). In addition, it objected against an understanding that attributed either a feminine or a masculine innate *essence* to these two genders, because of how these essences were seen to govern the behaviour and thought processes of category members (Robert 2014, p. 24). In other words, this sort of *essentialism* assumes that certain stereotypical masculine and feminine traits are both universal and essential regardless of the temporal or spatial context at hand (Harris & Cipolla 2017, p. 31). This not only takes for granted a deterministic connection between body and behaviour (Brady & Schirato 2011, p. 138), but also ends up reducing difference into binary oppositions and fixed characteristics (Egeland & Gressgård 2007, pp. 217–218). Integral to queer theory, 'normativity' came to be defined as having a moral connotation, but it also referred to the norms that govern gender, such as ideal dimorphism, heterosexual complementarity of bodies and proper masculinity and femininity (Butler 1990, p. xxi, p. xxiv). Though there is a difference between *normal* and *normative*, mainly the former being statistically determined, and the latter morally determined (Spargo 1999 as cited in Giffney 2004, p. 75), this distinction is not always clear. Thus, the word *normal* is often, albeit unconsciously, imbued with connotations of worth with regards to what people should be, and implicit in it is also its juxtaposition with *abnormal*, which ends up representing the unwanted and the unnatural. Armed with this insight, queer theory's contra-normative position not only gave voice to the marginalised, but it enabled possibilities for other ways to know and to be, making it necessary to deconstruct taken-for-granted views and categories, revealing them for the constructions that they are (McPhail 2004, p. 6; see also Dowson 2000). *Constructionism*, in contrast to essentialism, states that it is in fact cultures that have a hand in producing things perceived as being natural (Brady & Schirato 2011, p. 137). This brings us to *denaturalisation*, another tactic employed by queer theory, which belies the process of naturalisation through

which natural becomes synonymous with fixed and non-negotiable (Butler 2004, p. 186) – not to mention morally proper. Therefore, in its simplest form and from a methodological viewpoint, queering means the questioning of norms and the denaturalisation of given categories that according to Aristeia Fotopoulou (2012, pp. 25–26) ‘lock subjects into taxonomies’.

Queer theory is particularly well suited to reveal the problems in the categorisation process that do not merely organise, but also end up naturalising, limiting and reducing complexity by misclassifying people and excluding difference, rendering unthinkable that which falls outside the bounds of categorisation (Brady & Schirato 2011, p. 9; see also McPhail 2004). This happens, due to essentialist ideas, because in the creation of categories therein lies the assumption that all members sharing a common signifier, for example sex, also share a common – essential – identity. This poses a circular problem, as recognised by Alice Fotopoulou (2012, p. 26) because these categories are used to generate statistical results, that in turn generate that which is considered normal, which in turn leads to essentialised identities. Therefore, the assumptions concerning essences present in the categorisation process are later reaffirmed in the results of the research. In other words, a statistically measurable normal can be nothing more than an assumption created and affirmed through uninformed categorisation. Scientific quantitative methods then use these categories without questioning them, as the data is understood to represent scientific and objective empirical knowledge. Due to the categories’ tendency to reify what they classify bringing to mind that members of any given category warrant this classification on the basis of some fixed essence, Barad (2007, p. 66) has leaned towards the moniker ‘material forces’ in referring to social factors, instead of using the term categories.

Queer theory had a hand in influencing gender studies and feminist theories in critical ways (Rosario 2009, p. 267). This also included intersectionality, which as a whole, was far from unified in terms of how categories should be approached to begin with. However, it was *anticategorical complexity*, as labelled by McCall (2005, p. 1773), which took in the ballast of queer insight and, influenced by it, became to eschew fixed categories that are created based on natural “facts”. As a queer approach, one that held a legacy of postmodern thought, it also sought to distance itself from difference conceptualised in binaries, questioning naturalised classifications and established, foundational categories (Fotopoulou 2012, p. 20). Ingrained in the anticategorical approach is also the tenet that in order to gain an understanding about social

life, the deconstruction of analytical categories must function as the method of choice, if only for the fact that categorisation may have a hindering effect on imagining what may be possible (McCall 2005, p. 1773, p. 1777, p. 1785; Egeland & Gressgård 2007, pp. 216–217). Even though categorisation is a way of trying to organise the world around us, it is all too easy to revert back to the “default settings” and use social categories that, even as they seem to arise from the research material, are, in actuality, already familiar to us and derived from our own spatial and temporal context. This process is usually done without questioning the adaptability or the meaning of the categories in use. As Joan Fujimura (2006, p. 67) has pointed out, categories are the product of their time, and rather than being universalistic, are more aptly characterised as being ‘particularistic’. By way of deconstruction, this queer approach therefore reveals in a reality, which is complex, mutable, unstable, messy, blurry, situational and relational. Being also context-specific, in other words dependent on cultural and temporal conditions, difference in terms of social identities comes to be characterised as a continuum rather than a fixed binary (Geller 2008, p. 116). Relationality, in turn, also comes through in the researchers themselves, who tend to be accompanied not only by the larger episteme prevalent in the science community, but also guided by their own ideologies, values, agendas, perspectives and concepts. Engaging with anti-categorical approaches therefore render suspect the objectivity that the analytical scientific process lends to categories. Lastly, anti-categorical approaches posit that it is not empirically possible to distinguish between categories (Martinez Dy, Martin & Marlow 2014, p. 455, p. 458), which holds with both the relational nature and the instability of social variables.

Though queer theory and the feminist theories of difference rose out of postmodernist and poststructuralist thought, these are not the only philosophical movements of note pertaining to the study of sex and gender. Taking into consideration the topic of this thesis, of special consideration are the current views brought on by new materialist feminists, who see substance and significance as ‘consubstantial’ (Kirby 2008, p. 223), who argue ‘that sex, like gender, is a sociomaterial product’ (Fujimura 2006, p. 75), to whom matter and meaning are entangled phenomena (Barad 2007). These feminist scholars have continued where Whitehead seemingly left off, almost a century later. However, matter’s position within the field of feminism is somewhat contradictory, considering feminist criticism directed towards natural science. The work of second wave feminists with biology is not destiny as a central tenet, and the seeming animosity aimed at nature as that which seeks to essentialise and confine women, made nature a volatile subject best left alone. As feminists affiliated with the natural sciences attest, this has

come as no surprise as it is somewhat understandable to respond with a healthy dose of scepticism towards something that in the past has been used to fuel sexist agendas (Grosz 2008, p. 23). With especially feminist postmodernism firmly positioned in seeming opposition to approaches drawing from biology, an alliance seems unorthodox, but new materialists are often ready to give credit to the camp of ‘postmoderns’ as that which has allowed for innovative and insightful thinking with regards to gender (Alaimo & Hekman 2008, pp. 1–2). Furthermore, as Stacy Alaimo (2008, p. 241) has purported, and one is compelled to agree, the biology is not destiny tenet, supported by conventional feminism from the second wave onwards, sprung from biology that had been put to essentialist use. For feminists this was a prime example of biology gone wrong that necessitated action – one that arrived in the form of the split between sex and gender. An unperfect solution, as it turned out, but a way out, nonetheless. Though the legacy of second wave feminism is such that there is some evident reluctance to return to nature and to biological concerns, for the fear that determinism, naturalism and essentialism lie in wait, new materialists have expressed, that without theorising about matter and seeking to engage with material things, other avenues to making science besides critique are closed off (Kirby 2008, p. 220). As feminism would function only as a bystander in the making of science, opportunities for change would be excluded. As Alaimo (2008, p. 241) and others have suggested, only by actively involving feminist thought in matters of biology and the biological body can the plug be pulled on biological determinism and sexist essentialism. Material feminists then seem to be of a mind that failing to theorise, can only help to maintain the problems that we would be well rid of.

2.3. The adoption of gender into archaeology and the specification of the gender field

The path and turns that gender has taken in archaeology largely follows the development within the field of feminism, with some key exceptions. Gender was adopted into the archaeological theoretical discourse during the mid-80’s (see Conkey & Spector 1984) as a thing deeply mired in essentialist binarism, with the two social groups, men and women very much being viewed as universal and homogenous. In addition, the social differences between women and men continued to be regarded according to stereotypical standards while women’s work was more or less consigned to the sphere of the household (Gilchrist 1999, pp. 17–18). In some cases archaeological address towards gender was lacking in its entirety, which was due to processualist epistemology that held that past societies were better equipped to be approached on a macro-level, and that micro-variables such as gender lend themselves quite ill to

archaeological scrutiny, owing to the nature of archaeological data (Rubio 2011, p. 25). Though mortuary settings are currently considered a treasure trove of information concerning gender configurations in the past, this has not always been the case. Within processualism, mortuary depositions were thought to reflect patterns of societal structure of past human societies under investigation in a passive sense (Sofaer 2006, pp. 14–17). Along this train of thought, they conveyed information concerning the stratification and the economical position of the society, without the ability to infer anything more complex. Gender archaeology sought to change this and the attitude towards gender in general by bringing women into the foray of archaeological representations of the past, albeit in an essentialist manner, mirroring the determinism evident in the sex/gender system. As cultural-historic archaeology and its critique led to subsequent archaeologies of a more scientific-persuasion, namely processual archaeology, which then gave way to postprocessualism, gender became affiliated with the realm of postprocessual and gender archaeology. This is understandable, as processualist pursuits seemed to favour interpretative humanist means over scientific models, which coincided with how gendered approaches sought to conduct their research enquiries. Sex, in turn, became to be approached as belonging to the realm of the natural sciences and thus researched correspondingly, using strict scientific analyses. This development also led to the body situating itself firmly within the mortuary setting to the forefront of scientific enquiry, which became to be concerned with the sex binary and how it relates to material culture (Sofaer 2006, pp. 17–18). This forms the first of many divisions to come.

Soon theoretical novelties in the wake of third wave feminism by way of intersectionality traversed disciplinary bridges into gender archaeology as well, broadening the concept of gender, but despite feminist input, gender archaeology sought to maintain its unique stance, at best adopting ‘strategic ambivalence’ as its epistemic position (Wylie 1997, p. 81). This meant that in general it sought to distance itself from topics deemed too political and marginal for fear they would alienate the mainstream (Hill 1998; Hays-Gilpin 2000, p. 93). However, it is clear that gender archaeology (and also postprocessualism to an extent) was influenced by contemporary debates of feminism, whose critique of science revealed the inadequacies of the processual movement with regards to the essentialist and monolithic concept of gender, which caused them to react accordingly (Ghisleni, Jordan & Fiocoprile 2016, pp. 758–768, p. 770). Elsewhere in archaeology this development went mostly ignored. In a way, the continued engagement with feminism furthered the marginalisation and specialisation of the field, especially where gender archaeology broached topics that were palpably feminist, resulting in

some gendered approaches to be more feminist-informed than others. As Geller (2009b) has brought forward, this development made it so that some researchers began to engage with gender without also engaging with feminism. Illustratively, though intersectionality was taken onboard and, in some cases, thoroughly embraced by feminist-inspired archaeologies, including humanistic bioarchaeology (see for example Joyce 2000; Meskell 2000; Voss & Schmidt 2000), most fields, especially scientific ones, did not regard it with the same enthusiasm. In truth, intersectionality may have flown completely under the radar when it came to some of these disciplines, but even if they were aware of it, the use of the sex/gender model continued unabated accompanied by a monolithic understanding of gender. These divisions became the main organising principle according to which gender came to be managed and researched in archaeology. One such division is alive and well, for example, in the marginal engagement with queer theories, that shine with their absence where scientific pursuits are concerned. Queer theories' strength regarding archaeology, however, was not unnoticed by the camp of feminist enthusiasts who were especially taken with its pursuit to divest categories of their universality by revealing them as historical constructions that have temporality (Franklin 2001, p. 114).

Truly, the early days of uniform gender archaeology with its single-minded quest of finding women in the past and making their contribution known are long gone. Instead, the field has been transformed into a multi-disciplinary arena, where theories and methods abound and critique is levelled at the conventions and assumptions of scientific practice. Presently, the study of gender in archaeology is a field wide and varied, including many a different strategy. It seems that now there are as many names used in reference to archaeologies that deal with gender as there are methods to approach it. Each of these approaches emphasise different aspects, and for example Catherine Roberts (1993 as cited in Conkey & Gero 1997, p. 423) makes a distinction between gender archaeology and gendered archaeology. The latter, which can be seen as more feminist-inspired, Roberts associates with reconceptualization. This means that gendered archaeology seeks to theorise and question the nature of gender, while gender archaeology simply accepts and uses gender as a category among others. This distinction is significant, since, subjected to feminist critique, the argument is that the categories themselves need to be investigated for their saliency, as broached in the previous section. On a similar note, Margaret Conkey and Joan Gero (1997, pp. 416–418) have identified various theoretical positions that deal with the conceptualisation of gender. Though it is common to chance upon all of these positions at one time or another when perusing through the vast array of research and literature on the subject, two of these in particular are of concern regarding the premise of this thesis,

gender as a biological strategy and gender as a social construction. It is here we see the divide clearest between scientific and humanistic and between feminist and non-feminist, which allocates gender into either a realm of biology, or a social construction, detached from matters of matter.

The former conceives gender in terms of a binary biological sex, which finds parallels in a similarly binary gender. Due to the affiliation with biology and nature this strategy has also been referred to as 'naturalist' (see Harris & Robb 2012, p. 676). However, taking into account its oppositional stance, which pits it against social constructionism, it could also be termed a scientific realist position (Barad 2007, p. 48). Whatever name it bears, it understands gender solely as a cultural interpretation of sex, resulting in a state of ignorance towards the many intricacies related to gender. In other words, this concept of gender is deterministic and universalistic. This is because while sex pertains to biological difference between two sexes, gender being a cultural interpretation of said biology nevertheless sets definite roots in it. Gender is thus taken to be intrinsically linked with the body's biology, male meaning man and so forth. This strategy is one most familiar to mainstream archaeologies and non-feminist gender archaeologies, to whom the model of sex/gender seems to offer a truce, with biological science in one direction and social studies in another. This strategic position undoubtedly factors in its appeal because human remains can continue to be sexed and gendered along previously established osteoarchaeological principles, and the insight gleaned from this process can be used to gender objects, places, practices and so on (Sofaer 2006, p. 2). The necessity within this strategy to maintain binary divisions between sex and gender and between male and female stems from the notion that such divisions are essential to conducting research, because without them, gender loses its frame of reference. In other words, the bonds remain strongly tied. Therefore, even as gender is perceived as a cultural interpretation, sex remains at the heart of it, sometimes criticised but used, nonetheless. Incidentally, this bark-with-no-bite attitude toward sex, paradoxically both dependent and critical at the same time, is characteristic of the discipline of gender archaeology less in tune with current feminist discourse (Sofaer 2006, p. 20).

Gender as a cultural interpretation of sex is widely accepted and rarely problematised, even though rendering gender to a cultural interpretation of sexual differences is clearly restrictive, tying it down to sex difference. The argument here is that the sex/gender model upon closer inspection reveals to be the two sex/two gender model (see for example Joyce 2008, p. 18;

Arnold 2002, p. 239), meaning that through the process of sexing individuals with a binary male/female framework, gender in effect comes to be determined by default. As the gender binary is widespread and seems to be accepted and expected wherever one turns, the occurrence of such scientific realist attitudes even within gender approaches presents no real surprise. For example, most available models in archaeology in terms of how society is structured maintain a binary notion of gender, such as gender hierarchy and complementarity (see for example Stockett 2005 for critique). Here the two recognised genders are either hierarchical with respect to one another, one being dominant, or they are complementary, meaning that the genders complement one another and are thus more or less equal. Even heterarchy (Levy 1999; 2006) maintains the taken for granted binary, even as it allows the subjugated gender in a predominantly hierarchical system to hold positions of power, even over those who in other settings are more privileged. Though there exist some exceptions, especially when it comes to research focusing on gender within this particular approach, where attempts to circumvent the binary are evident (see Sofaer 2006), most sex/gender users operate within a dualistic framework. Opting for a dual strategy, rejecting some form of binarism while embracing another, is also a familiar occurrence.

Those disillusioned with gender as a biological strategy may end up turning to gender as a social construction. Unfortunately, this approach, which focuses its attentions to cultural aspects of gender and sees gender detached from the mere materiality of cumbersome sex, also often ends up upholding the sex/gender model, with few notable exceptions (see for example Alberti 2006). Albeit unintentional, this outcome happens nonetheless in a covert way, inadvertently through neglect. Though in the early days, feminist inspired archaeologies dappled in empirical and scientific approaches as well, and the theoretical heritage of gender archaeology has its roots in processualism that drew heavily from scientific positivism (see for example Rubio 2011, pp. 23–33), more recent ventures into gender are often accused of deeming the science of the biological body as a necessary evil, the study of which is irrelevant in the grand scheme of things. In other words, these sort of gendered archaeological approaches are cognisant of the problems of sex but understand them to go with the territory and therefore end up downplaying sex's importance relative to gender, usually opting to emphasise the abstract, at the cost of leaving material bodies untheorized (Alberti 2006). As the body becomes to be transferred from nature to culture through a context-specific symbolic system any previous conceptualisations rooted in biology are thus displaced with social construction. The means through which this transformation can be achieved are various, including performance, phenomenology,

embodiment and agency, but while these approaches can be used to access the abstraction of gender in the past, they all fail to incorporate matter. Currently, this lack of engagement with bodies seems not to be on account of disinterest with the material body, as rising attention with posthumanistic theories of materiality attest, but rather aversion with essentialism and biological determinism, brought on by a steadfast adherence to feminist legacy. Though the questioning of dualism has been around for a long time, evident within theories of embodiment for instance, engaging with gender only on an abstract level has left the neglected sex/gender model to remain unchallenged in archaeology as a whole.

For the most part, gendered archaeologies' enthusiasm towards gender diversity and multiplicity stems from feminist postmodernism, poststructuralism and queer theory, which is no coincidence, as currently it stands that these postmodernist approaches are the only ones to enable gender diversity and inclusion, fluidity and multiplicity to their fullest extent. Despite this, they have yet to provide a gender-plural model that is able to function beyond the realm of theoretical discourse (Brady & Schirato 2011, p. 138). A new strategy is therefore needed, one that takes both matter and meaning seriously, so that the creation of 'empty shells' (Insoll 2007, p. 4) can be avoided. In the face of this evident problem, one strategy has been to try to reintroduce matter into gendered accounts. For example, the potential to this end provided by Karen Barad's agential realism and posthumanistic performativity has been noticed, and for example archaeologists Benjamin Alberti and Yvonne Marshall (2014) have utilised Barad's particular brand of matter-meaning entangling magic to study archaeological materials in the form of Taonga amulets. However, bioarchaeology can also offer its own contribution, as it is steeped in potential with a unique position in between worlds, which provides a suitable platform towards engagement with both culture and nature. Studying gender through bioarchaeology and osteology is also advantageous, because these more mainstream approaches have a way of introducing the more marginal subject of gender into new and broader avenues. However, even as bioarchaeology considers gender to be among its most important analytical categories, gender tends to be approached from a biological standpoint because these research ventures are not subsumed under the guise of gendered archaeology and are thus unaffected by its feminist theorem. As most biological approaches lack any sort of feminist informed gender awareness, having chosen not to engage with social theories, gender concerns are likely to fall under the jurisdiction of the scientific paradigm – to their detriment, as we will discuss in the next chapter.

3 Sex and gender in sciences and biological archaeologies

Next, an account of the development of biological thought pertaining to sex is in order. As we turn to examine biological archaeologies, a term used here to describe namely bioarchaeology and osteoarchaeology, we come to understand that these take the biology of the body as their premise, which is why the established biomedical paradigm exerts a strong influence on how sex and, in turn, gender are currently understood and handled. Scientific approaches see the body, by methodological necessity, as a fixed, universal and thus analytically comparable entity, and as they veer from engaging with social theories, the field can be characterised by an obsession with the sex binary. This culminates in honing existing techniques and developing new methods always seeking to improve on the methodology and accuracy of determining with even greater precision males and females in the archaeological record. The second part of this chapter continues the “sex-talk”, but here it is meant to show that the historicity of the concept and gendered accounts can affect how sex is perceived, how – as proclaimed by Gisli Palsson (2013, p. 39) – ‘nature is always already culture’. By establishing that cultural understandings have a way of feeding into and influencing how nature is understood, it becomes clear that the binary is but one interpretation inducible based on the flexibility of bodily matter that comes together with meaning to provide sensible accounts. In the final section, looking at the body in particular, it is brought forward that nature and culture and therefore also sex and gender lend themselves poorly to a separation because the foundational differences that the deep-seated divisions are based on do not hold up to scrutiny. Here at last commences the formulation of inseparability concerning these two.

3.1. Researching sex and gender through biological archaeologies

As previously mentioned, biological research that touches on issues pertaining to archaeological gender can be inspired by social theories and prove the better for it; a trend among some bioarchaeologists and osteologists is to emphasise the cultural, the temporal and the local context of human bodies all the while embracing the diversity of past gender alignments (see for example Geller 2008; 2016). For example, humanistic bioarchaeology and its life course approaches tend to incorporate intersectional intercategory thinking, showing that instead of being separate and stable, age and gender are in a flux, changing and being transformed by one another. This meritoriously takes the complexity and the multigroup nature of categories into consideration. In this regard, postprocessual archaeology can be seen to have

influenced biological archaeologies as well, making gender a more readily included topic of enquiry (for a more in-depth account into bioarchaeology's development see for example Zuckerman & Armelagos 2011). However, despite the notable interest that engagement with social theory has aroused, it has yet to gain prominence within all biological archaeologies (Sofaer 2011, p. 286). As for intersectional life course approaches, they are rarely discussed outside humanistic bioarchaeology. For the most part, sex and gender both continue to be understood as stable concepts being maintained more or less the same throughout a subject's life, and how changing bodies may affect gender views and amount to new configurations remains on the fringes (Sofaer 2006, p. 100). Advances within humanist biological archaeology that includes attempts towards rejecting dualisms and the pursuit of entanglement of matter and meaning, closely seconds the tenets of current feminist theories. However, as they constitute only a small part of the whole, the division within the field is brought into a higher definition (Geller 2016, pp. 77–78).

The difference between science-informed and humanities-inspired biological archaeologies is most evident in the 'gender question' as has been brought forward by bioarchaeologist Pamela Geller (2016, pp. 41–43). Along this line of thinking, roughly two strategies can be identified, one characterised by wilful ignorance and unaccountability, the other by deterministic beliefs masquerading as certainties. The former holds many eerie similarities with how gender came to be handled as an abstraction. According to Geller (2016, pp. 41–23), though gender had been one of the key research questions since 1998 with the sex/gender model acting as the theoretical framework for interpretative inspiration, the analyses focused more on biological sex while gender was allowed to fade beautifully into the background. Consequently, through this neglect as well as the one shown by those who granted singular attention to gender, the sex/gender model itself and the relationship between these two concepts was left unproblematised. For example, Geller (2008, p. 120) states that bioarchaeologists who understand sex and gender as separate, seek to claim that their analysis only focuses on the biological anatomy of the individual, without making any claims on gender. However, as these researchers also utilise a biomedical framework that, in actuality, makes no difference between these two, as it sees them as basically interchangeable, disclaimers spouting ambivalence towards gender do not amount to much. In other words, if gender is implicit in sex, when making statement about sex, one is making statements about gender, albeit inadvertently. Respectively, the former strategy comes across through those that take the sex/gender model onboard with all the deterministic trimmings and do so knowingly. To them sexual difference is more vital than any other sort of

difference, and additionally, it is the root cause leading to other types of difference (Butler 1993, p. 122). Though Sofaer (2009, p. 158) maintains that osteoarchaeological determination does not ‘preclude’, further investigation into gender, and this certainly holds, within this sort of a framework, such ruminations rarely follow or are in fact considered even remotely necessary. Instead, after sex has been determined and made known, further enquiries become superfluous – gender merits no other consideration. As Geller (2008, p. 119) points out, this framework is such that even a gender role is defined as dimorphic sex-typical behaviour (see Lee et al 2006). This goes a long way in explaining commonly held beliefs in the field of biomedicine, from which much of biological archaeology draws its views.

This misconception can be attributed to two things. The first, as discussed previously, stems from disciplinary tradition, which separated scientific pursuits from humanistic ones. Owing to the long-standing tradition of being associated with the natural sciences, most science-inclined archaeologists opt to work according to the rules and regulations of this particular field. As biological approaches formed in the mid-1970s from biological anthropology for the purpose of studying people in the past through natural sciences using interdisciplinary methods such as osteology, molecular biology and genetics to name but a few, the steadfast adherence to these methods demonstrated by biological archaeologists is not all that surprising. However, biological approaches also include taking in stride the firmly held conviction that science should be apolitical, a neutral ground of knowledge and discovery, which helped to conserve mainstream scientific thought from the efforts of feminist activism (Fausto-Sterling 2000, p. 10). The second root of misconception, which has equally contributed to the current disjointed state, is traceable to the antagonism between method and theory, sometimes likened to oil and water. The situation deteriorated to the point of wilful non-engagement with social theory. As it now stands, practical scientific analyses are deemed theory-free, but as researchers such as Sofaer (2006, p. 39) have brought forward, the theory inherent in science is often unacknowledged, which is why it remains unproblematised. Instead of blatantly waving it about, science is instead steeped in what Sofaer (2006, pp. 33–34) calls ‘tacit theory’. For the most part, these are to do with a reliance on scientific epistemology, that in the case of sex draws from biomedicine, and an essentialist and normative attitude towards the certainty of a dimorphic sex binary, as well as the universality and objectivity of categories deemed natural.

For the most part then, biological archaeologies do not tap into gender theories beyond the sex/gender split originating from the 1980’s, and scientifically inclined pursuits still determine

sex and gender according to a fixed binary. As has been previously discussed, this is problematic because naturalised categories such as sex gain veracity and so often end up transformed into categories of social relevance, though the causal relationship between these should not be assumed. Analogous to this discussion is for example how chronological age inadvertently ends up transforming into social age (more from Sofaer 2011, p. 290). To clarify the relevance of this issue further, it is a widespread notion among researchers within biological archaeologies that without sex determination and the division of samples according to male and female lines, it is nigh on impossible to realistically make statements about gender and move beyond mere hypothesising. In this, their thoughts coincide with those gender scholars within archaeology who ascribe to the “gender as a cultural interpretation of sex” trope. That the division of samples is believed to be a necessary step is showed clearly by the rejection of statistically significant results drawn from the combined sample, meaning males and females together (Agarwal 2012, p. 331). This, as proposed by Sabrina Agarwal, shows that it is well-founded in current practice to deem the division sensible, and the presentation of the results must then follow the binary pattern of setting males and females in separate oppositional camps. As the division between males and females is taken for granted, so too are the data results expected to echo this fundamental understanding. In other words, the data is expected to showcase, verify and justify the “truth” behind the sex dichotomy.

Endeavouring to include some diversity to a predominantly binary framework has met with little success in biological archaeologies and, in turn, mainstream archaeology drawing from these sources. Paradoxically, in spite of the blatant assumption that sex equals gender, it is standard practice to evoke gender ‘as an *alternative* interpretation’ (Sofaer 2006, p. 100, original emphasis). In other words, gender need not be factored in the equation until all normative avenues of interpretation have been exhausted. Only when sex and gender seem not to match unequivocally in a neat and binary fashion, does gender come into play. This very strategic position in the use of gender – deterministic on one hand, but relevant in the presence of anomalies, is problematic because even as determinism surrenders its hold for a time, the firm grip on binarism assures that what emerges as alternative arrangements are queered. This means that they are labelled abnormal, even deviant, because of their immediate juxtaposition to the normative gender binary (see Matić 2012; 2016). Clearly, engagement with gender diversity beyond the binary has been lacking. In addition, though there exists a lot of evidence for diverse gender expression to be found in the archaeological record, deviations from the norm have, at times, been wilfully kept under wraps, even pushed under the rug or explained

away in a ‘systematic repression of knowledge’ as voiced by Mary Weismantel (2013, p. 320). Though humanistic osteoarchaeological and bioarchaeological approaches emphasise intra-categorical variation and thus seem to share gendered archaeology’s concern with diversity (Sofaer 2006, p. 100), there are some key differences between these two approaches. Mainly, it is to do with how diversity is understood and how it is managed. This comes across most readily through methodology.

Typically, an osteological analysis begins by grouping individuals into five categories based on a continuum of features between hypermasculine and hyperfeminine, situated at opposite ends of said continuum. The analysis is the one known as sex determination, but according to bioarchaeologist Julie Wesp (2017, p. 105) it is rather more an estimation than anything else, due to the element of uncertainty with regards to the determination process. In fact, no individual can be sexed with a 100 percent certainty – a margin of error is ever present. In addition, with every case there are individuals who defy the process, too little may be left of the bones to make an accurate determination or, quite significantly, the skeletal structure of some individuals is simply too ambiguous. The five-degree scoring system in which individuals are either categorised as male, possible male, undetermined, possible female or female seems to take variation of features between individuals into account but ends up recognising only two analytical categories. Subsequent analyses are often carried out excluding all but the determined specimens. This is how further interpretations about gender come to be made according to only some of the individuals, and only the individuals who seem to fit the predestined two-way model. The ambiguity pertaining to sex is made less so through this process of sex determination, as the objective voice of science speaks in authoritative tones, emphasising universal standards and basing its claims on seemingly impersonal measurements, rendering the categories to which all individuals are sortable universal across time and space (Gero 2015, pp. 14–15). This is criticised by Joan Gero (2007, p. 320) who argues against such a practice of ‘dampening variance’, because making data fit a priori categories, that constrain and make it seem more stable, homogenous and monolithic, leads to the removal of possibly significant data. As Gero (2007, p. 313) states ‘[t]he firmer our interpretative conclusions about the past (that is, the more we have unambiguously “determined”), the better archaeologists we are reckoned to be’.

As the categories male and female attest, biological archaeologies are heavily invested in the use of categories, but as discussed in the previous chapter, within the categorisation process,

danger awaits. In biological archaeologies, typifying, classifying and organising research data into different analytical categories and separate analytical units, objectively trying to attain what is evident, is common enough an occurrence. As a fundamental process, it is an integral, but oftentimes unproblematised part of empirical and analytical investigation, as categorisation is understood to be an essential part in analysing difference between individuals (Sofaer 2006, p. 35). Without it, it seems needlessly challenging to organise information about archaeological bodies, which we seem to need in order to gain understanding about lives lived. The diversity in the research material is conceptualised in categories of difference, the most commonly used in archaeology besides that of sex and gender are that of status, ethnicity and age. The categories that form according to empirical observations on the differences between research subjects have a purpose in managing data and drawing conclusions from it, but rarely is it taken into consideration that the classificatory process is in itself already a part of the process of interpretation (Agarwal & Glencross 2011, p. 4). As has been demonstrated, these differences are often founded on taken-for-granted binary divisions and seemingly natural oppositions, such as the reductive sexual categorisation into males and females, which act to influence thought and produce meaning. To this end, though Geller (2017, p. 81; see also Sørensen 2017a) has stated that etic categorisation should be differentiated from emic concepts, considerations of whether the categories in use in our own cultural context meant anything at all to societies in the past are few and far between. This is especially the case where scientific archaeologies are concerned. What this means is that universal categorisations created from the outside looking in by researchers studying a foreign culture do not seem to take into account that said culture's own concepts may not correspond to our own.

What unites all aspects of sex determination, in addition to the adherence to the sex binary, is that the process of the analysis is made to appear quite straightforward, devoid of the problems that are quite commonplace (Sofaer 2006, p. 33). In actuality, problems regarding the scientific analytical process and sex determination in particular abound in literature concerning the subject, if one cares to look for them. As with any kind of scientific determination that is done with the help of a reference material or a model adapted from such, be it sex or age determination, the results are far from neutral. In other words, they contain in themselves an imprint of the reference material that was used to create the model, which results in bias (Jackes 2011, p. 124). Furthermore, the use of the methods, which are formulated using recent samples, are problematic because they take for granted the generality of traits (Götherström et al. 1997). For example, it is important to bear in mind that the pelvis, which is seen as being universally

dimorphic, can in fact be more ambiguous, which is why its analysis in terms of sex may prove to be more challenging than often thought. This is because methods formulated after modern populations may not take into account that activity patterns of people in the past may have significantly varied in terms of intensity, which can affect muscle-attachment points altering the formation of the pelvis (Götherström et al. 1997, p. 72). In addition to the degree of difference in the sexually dimorphic traits, populations differ in terms of the traits themselves. In other words, a dimorphic trait used in analysis may not show similar dimorphism in another population. The overlap of sexed characteristics, meaning that an individual may possess both “male” and “female” features, too leads to contradictory results. Taking yet another factor into account, the change observable through time both within an individual’s lifetime and across whole populations, leads Jaroslav Bruzek and Pascal Murail (2006, p. 226) to state that ‘no single trait of the human skeleton enables a reliable sex determination’. To add insult to injury, for the results to be reliable, the material under analysis must be of an adequate size (Gilchrist 1999, p. 43), which often poses a problem in archaeology.

Despite the evident misguidedness of the sex binary, it is constantly being updated into newer forms, as old ones begin to exhibit too many exceptions that confirm the rule (Sanz 2017). In addition to the traditional method of inferring sex from bones based on skeletal dimorphism, researchers have devised numerous scientific methods to determine sex. For instance, a method has been developed where the weight of cremated remains is examined, as the assumption maintains that female’s remains must weigh less (Brück 2009, p. 10). Others include odontometrics (see Vodanović et al. 2007), craniometrics (see Chovalopoulou, Bertsatos, & Manolis 2017) as well as an analysis targeting the ratio of Fe and Cu stable isotopes in bone (see Jaouen et al. 2012). However, ancient DNA is perhaps the method of choice for most researchers, though so far it has prompted multiple adjustments to the original method, in the hopes of providing better results. Unfortunately, newer methods are no guarantee for new modes of thinking, as Geller (2016, pp. 44–46) and Wesp (2017, p. 99) attest. For even as bones were once held to enclose the secret to “true gender”, meaning here male or female, DNA and the overall science of the sexed body is now fully equipped to offer the same. As stated by Tim Flohr Sørensen (2016, p. 744), the reason for preferring archaeogenetics over osteoarchaeology stems from the understanding that genetics offers more objective and less ambiguous data. In other words, the ontological ambiguity of the archaeological material is never in question, only the method's incapability of producing better and more decisive data. As sex is seen as fundamentally clear cut, the chosen method should be able to reveal this, which explains the

ever continuing search for better methods. If one method proves false in that it seems incapable to sustain the binary, it is on to the next. One thing is clear, no matter the determination method, it seems to carry the same problem: deterministic beliefs and presuppositions about what it means to be *either* XX *or* XY. If left unproblematised, science, including archaeology, is doomed to reproduce this deterministic binary continuously, making it impossible to break away from the mould. But what if sex was not binary or an ahistorical “truth”. Instead, what if it is a thing which lends itself to multiple interpretations? Let’s look into this.

3.2. The historicity and multiplicity of sex

Though the scientific understanding of the body continues to be rooted in biology, with scientific methods deemed the more valid and relevant to the study of the body (Sofaer 2006, p. 28), taking into account all the aforementioned points of conjecture concerning sex determination, it is safe to say that sex does not readily lend itself to a binary. But if sex is first and foremost a scientifically examinable biological reality of the body, how can this be? Deborah Findlay (1995, p. 27) has declared that ‘biological sex should be studied as social knowledge’, thus voicing the shared opinion of many gender scholars. However, approaches that seek to deconstruct sex are not common outside feminist scientific discourse, where the majority of the contributions regarding sex as a social construction have been made (Findlay 1995, pp. 27–29). Though feminist discourse is usually attributed to all things abstract and complemented with a deeply postmodernist vibe, in the wake of postmodernism, feminism and queer studies have been problematising biological sex by forwarding its historicity as part of a modern western biomedical paradigm (Geller 2016, p. 4). What postmodern critics have taken umbrage with is how biological sex is not conceptualised as being variable and prone to change; rather, it is seen as a natural, empirical and objective fact, static and unchanging, untouched by cultural and temporal factors. Two types, males and females, with their distinct physical and biological properties that set them apart, is the foundation upon which our scientific understanding of variety rests, and as far as it seems willing to extend. Sofaer (2006, p. 96, p. 101), for instance, for all her progressiveness concerning some areas when it comes to gender and sex, has stated that the physical body has ‘a reality of male and female’, which should be retained. Though this sort of statement invites debate, sex is, certainly, on some conditions, crudely attributable to two categories. It is, however, attributable to other interpretations. As brought on by Oliver Harris and John Robb (2012, p. 669) within a western dualistic ontological

frame of mind, a distinction is made between things and concepts, what things really are and what they can be conceived to be. Within this mindset gender and multiplicity is only a concept of a reality that is inevitably binary in nature. However, if the ontological certainty of binarism is relinquished, multiplicity of the body in terms of sex can be just as real.

If one seeks to unravel the myth that is sex, one needs only to turn one's inquisitive gaze towards history. Even though it might seem an obvious fact that biological dimorphism distinguishes two sexes, and that this view is shared universally, the male/female dichotomy is a taken-for-granted Euro-American point of view. It is therefore a product of a specific cultural and historical context and thus meaningful in reference to this cultural framework (Brady & Schirato 2011, p. 34). As Thomas Laqueur's *Making sex* (1992) aptly communicates, the universality of two sexes opposite one another with bodies understood and conceptualised as complete opposites is a relatively modern construction with its own genealogy and history. According to Laqueur's argument (1992, pp. 25–35), which he formulates based on his research on the corpus of the written word from ancient Greece to the enlightenment, the 'one sex/one flesh' system was prevalent. This means that there was no cause to divide forms into male and female categories, as only one form was recognised, while others were only variations from this one true form. Bodies appeared different due to heat, and more heat meant masculinity and perfection whereas less heat lead to femininity and imperfection, but difference was more or less distributed across a continuum. Thus, women's less-perfect bodies differed from men's only with regards to the placement of their organs: due to a lack of heat, women carried their penises and testicles on the inside. The bodies on the continuum of perfection were seen to have adopted suitable roles in society and it was these roles that distinguished people, not anatomical bodies. Furthermore, it was believed that actions could instil hotness or coldness: men could lose some of their innate perfection and become womanly (Laquer 1992, p. 124), while women, as subjects deprived of perfection but always striving towards it, could indeed gain heat, which would be accompanied by a spontaneously sprouting external phallus (Laqueur 1992, p. 7, p. 127). Bodies as well as social identities were regarded as being fluid. This fluidity manifests as potential, meaning that even as the gender system appears to be binary, there is significant negotiation and traversing going on. Such has been attested for example by Elizabeth Reis (2009, p. 2, pp. 12–14, p. 35) who, in the course of her research into the subject of intersex and its historicity, noticed that, when given the choice and freedom, bodies, irrespective of typicality, tend to live relatively "normal" lives according to the standards of their times. Possessing a different body does not by necessity pose a problem. People then, regardless of bodily

morphology, can conform to gender roles and norms, but attitudes towards gender roles may be more fluid and prone to change. As Reis points out, this changeability may have come across in the adoption of an identity, which was at once both masculine and feminine. Alternatively, it may have manifested in the alternation between roles, which seems to have been done with relative ease.

According to Laqueur (1992, p. 70) the model of one-sex continued unabated even during the renaissance, when anatomists began to systematically delve into the womanly body but found nothing to contradict commonly held beliefs about the similarity of bodies. Rather, their numerous enquiries seemed to support them. Indeed, it was only in the 17th century that mainstream ideas about sex seemed to shift when femaleness denoting nomenclature as a language of distinction started to appear. Thus, sex began to be viewed as oppositional and fundamentally dichotomous with female at one end and male at another. As female was to male an opposition and a contrast, the meeting of the two sexes seemed impossible with difference being laid out in every conceivable way. As Laqueur (1992, p. 6) contends, biology was erected as the arena of sexual difference, and it was now perceived as that of a 'kind', and not of a 'degree'. Where previously behaviour and action in the social arena in terms of decisive gender boundaries was more important than any physical reality of sex, now biology and the difference rooted therein determined two distinct sex roles and social statuses dependent on incommensurable sex. Therefore, 'sex replaced gender as a primary foundational category' (Laqueur 1992, p. 154). Words that had previously been lacking in the scientific vernacular were assigned to differentiate organs, and sex differences were now seen everywhere, from the bones to the nerves to the mind (Laqueur 1992, p. 150). The strength of the notion of incommensurability was such that it was considered the only thing that could make sensible the seeming fundamental differences between men and women; gender differences had to have been grounded in nature. Here is where Laqueur's account begins to align with Butler's because, in their own way, they both propose that what influenced and continues to perpetuate the binary system of sex was indeed the maintenance of a strict gender exclusivity. Vicki Kirby's (2008, p. 218) statement, '[i]t is in the nature of culture to misrecognize culture as nature' finds validation in this. Seemingly everything that was once a variation of the same form, now had to be reconceptualised in terms of opposition. The making of the female skeleton represents an excellent example, as it was deemed crucial for it to represent the ideal, 'canonical female form' (Laqueur 1992, p. 168); according to 17th century scholars, any old female's skeleton would not

do, as it had to embody the ideal to the maximum effect, as far removed from the male as possible, like an ostrich is from the horse.

The days of ostriches and horses as metaphors signifying male and female difference have been left behind, but not by much. To elucidate, it has been argued that on the basis of sexual strategies, males and females should be regarded as different species altogether, and with regards to their brains, females have been referred to as *Homo parientalis* and males as *Homo frontalis*, describing how their brains supposedly differ enough to warrant designation into separate subspecies (Fausto-Sterling 1992, p. 4, p. 37, p. 60). Incommensurability, then, still seems to be the order of the day. But sex is more than just one or the other. There is more to it than meets the eye. As proposed by biologist Anne Fausto-Sterling (2013, pp. 5–7), sex is a thing that comes in layers, and like peeling back a layer upon a layer on an onion only to discover yet another in its place, so does the scientific unravelling of sex contain at least ten distinct sex differentiation stages that a body goes through during foetal development and puberty. To complicate matters, these different stages do not always coincide in a straightforward manner and intersex conditions require only one variable on the track of sex development to ‘derail’ it (Fausto-Sterling 2013, p. 23, p. 80).

Intersex as a phenomenon is diverse and it comes in many forms, shapes and sizes (Rosario 2009, p. 269). An average estimation of the condition of intersex (in genetics also known as sex reversal and in medical nomenclature as XY and XX DSD, disorder of sexual development, more from Hughes 2008) affects, on average, 1,7 percent of all births (Fausto-Sterling 2000, p. 51). This figure, however, is not uniform throughout the world, as many cases are caused by genetic mutations that can be hereditary or quite common among populations (Fausto-Sterling 2000, p. 53). In rural Santo-Domingo in the Dominican Republic, for example, a hereditary intersex condition is common enough to warrant its own name (Imperato-McGuinley et al. 1974 as cited in Fausto-Sterling 1992, pp. 86–87). Without delving in too deeply to the medical nomenclature, it suffices to say, that these variable conditions involve mosaicisms, where some cells of the body contain XY chromosomes and some contain XX (Sanz 2017, p. 9), and genotype-phenotype discrepancies, meaning that genotypes and phenotypes may not coincide in the usually expected manner. Furthermore, phenotypes may be mutable due to the effects of hormones beyond the changes one would expect at the onset of puberty. Interestingly, Fausto-Sterling’s (1992, p. 84) account of XY individuals unable to make dihydrotestosterone during foetal development, who are thus born with feminine appearing external genitals that are

masculinised belatedly at puberty while under the effect of testosterone, brings to mind the historical accounts provided by Laqueur of girls expelling their organs, thereby granting them the status of men.

The intersex issue has by no means clarified the messiness of sex, that through the course of western biomedical history has been a battleground of differing accounts of what it is exactly that which determines a person's sex. With novel ideas trumping over old understandings, it was first internal gonads that had to give way to external genitalia, which were in turn ousted by hormones, psychology and at last chromosomes (Reis 2009). The discovery of the sex chromosomes has been instrumental to the genetic determination of sex, as discussed in the previous section, though the exact function of the dozens of genes involved in sex development, even ones located outside the XX and XY chromosomes, are still not known (Rosario 2009). In archaeology, success stories such as the DNA confirmed female Viking warrior (see Hedenstierna-Jonson et al. 2017) that we will return to later, have raised the banner for determinations done by genomics, presenting them as more reliable and non-contestable than traditional osteological determination. No doubt, the benefits of employing ancient DNA analyses in archaeological work are numerous, as they can help to authenticate previous osteological examinations, or reveal erroneous identifications (Skoglund et al. 2013, p. 4479). Furthermore, as identifying intersex conditions through bone morphology is extremely difficult because only in some cases are there identifiable traces in bones (Geller 2017, p. 89), DNA could offer help here as well. Though there are some methods that cannot distinguish between, for example XY and XXY (Stewart et al. 2017, p. 13654), quantitative fluorescent polymerase chain reaction has been used to check for an atypical number of chromosomes (Hughes 2008, p. 123). This goes to show that some conditions might be possible to detect, provided that one knows what one is looking for. PCR could potentially reveal the presence of sex-reversal individuals, but it would mean searching for certain forms of gene expression (Brown 1998). This, however, is not routinely done. Though the presence of chromosomal variation is well attested and often acknowledged by archaeologists researching sex by means of genetics, variations as possible sources of complication in DNA analyses are disregarded on the premise of their statistical rarity. This is why it seems acceptable to 'discount' them with no further consideration (see for example Götherström et al. 1997, p. 79). The thing with genetics is the same as with previous methods in that the commitment to XX and XY is concerning.

The difficulties encountered trying to establish the link between binary sex and chromosomes, has led some to seek the binary yet elsewhere. Though, interestingly, natural science can be approached from very different perspectives leading to understandings that are radically different from the dominant view, such as the non-linear biological approach introduced by Myra Hird (2004), which brings to the fore the ‘queer’ in nature and matter, it seems that from a mainstream perspective the very genome now stands as a testimony to sex difference (Richardson 2013). Though there exists remarkable variety in the human genome, which has led some molecular researchers to advocate in favour of a model better equipped to conceptualise, what for example Vernon Rosario (2009, p. 269) deems the ‘polymorphic’ nature of sex, the binary holds its ground. Through all of this, the flexible nature of matter and its capacity to prompt numerous interpretations, even beyond the “reality” of male and female, finds itself ignored. But what should we make of all this variability of bodies, the varying accounts of sameness and difference that seem to convey a sense of the body as able to support contradictory views with ease? In Laqueur’s one sex/one flesh system, gender is seen as being mutable and unstable, which is why actions performed in the social sphere could influence matter and bring about veritable changes in it. Sex can present itself differently, as a flexible continuum or a rigid binary and depending on perspective, what others see as difference, others attribute to sameness. In Donna Haraway’s (1988, p. 594) words, difference, even a biological one, is situational, meaning that it is dependent on context, a certain set of circumstances that enable it and sustain it. Sex is therefore not a natural ‘human-independent fact’ (Barad 2007, p. 40), but even in its materiality a very cultural thing. Gender and sex come together in a very material way. This is something deserving a closer look.

As we near the end of this section, it should first of all be made known that the purpose of presenting the multiplicity of sex refrains from verifying any claim as to why and how sex as a physical ‘reality’ of the body should be fashioned into a multiple-sex model rather than a binary one. While maintaining the division between sex and gender as it is, such would be futile. Rather, showing how a binary notion of sex can be disputed illustrates how matter is prone and liable to multiple interpretations. The argument here is that sex is queer and multiple in its potentiality, endorsing even radically different views to make it intelligible. What we understand as the sexual characteristics of a body are no doubt important, but an approach which sees sex as something liable to interpretation does not exclude that importance. Having said that, even though sex is something that lends itself to variable interpretations, there is no reason why one ill-fitting model should be replaced by another. What I mean is that though the binary

model has its problems, a three-fold or even a five-fold system of sex categorisation based on phenotypical or chromosomal sex would fare no better in this regard, only leading down the road of biological determinism. If one were to model physical sex beyond the binary, in a way more allowing for the diversity found in nature, one could do this quite easily accounting for the different types of intersex, for example, as has been suggested, though in a rather tongue-in-cheek manner, by Fausto-Sterling (1993). However, what such an analysis would reveal, beyond a more tolerant view towards difference, is debatable. Same problems of trying to fit the data into the model and seeking to study the material according to a pre-selected frame, the relevance of which is not questioned, would follow. For this very reason, Fausto-Sterling (2000, p. 110) herself no longer supports such a categorisation. To relinquish the binary means a possibility, for bodies to matter in new ways (Butler 1993, p. 6). But this would mean little, if such a reimagination took it upon itself to reapply the determinism leading back towards a place where sex differences uniformly dictate social differences. As long as the sex/gender model, that holds sex as a fixed predetermined property of the body is maintained, it does not matter how many classes are identifiable. When the binary properties of sex are expected to reflect in a social setting as fundamental differences structuring society, gender is still determined by sex being determined. What I mean to stress is that a sex/gender system that is imbued with a dualistic ontology cannot produce a nonbinary system without determinism, even if binarism is left behind. Overcoming both determinism and binarism is easier said than done, however, as holding on to the ontology of dualism, its binaries and opposing dichotomies is common sense (Geller 2009a, pp. 504, 506). This common sense is also what Joanna Brück (1999, p. 332, p. 337) has termed ‘culture-specific rationale’, which also bears resemblance to Susan Hekman’s (2008, pp. 113–114) ‘social script’. It seems thus quite “natural” to see not only sex and gender as separate, but also commonsensical to hold nature, ergo sex, as fixed and unchanging in need of a cultural interpretation to give it meaning. But, as we will come to understand in the next section, nature is far from being fixed and matter is replete with entangled meaning.

3.3. The body as a materialcultural nexus

This section of the thesis focuses on how nature and culture come together to form a materialcultural body, making the omittance of the dividing line very telling. In a way, the ideas presented in this section continue what has been happening in and outside the discipline of archaeology for some time. An idea to integrate biology and sociology is no new thing, as for example the term bio-social was coined and used since the 70s, though with a slightly different

perspective (Palsson 2013, p. 238). In recent humanist bioarchaeological research (see for example Agarwal & Glencross 2011, p. 1, p. 5), it is evident that the physical body has come to be viewed as belonging to both the biological and the social realm. The very bones attest the validity of the theorem according to which the body should not be studied on its own as a separate entity removed from its cultural context. However, though the adaptive quality of bone when exposed to outside influences, for example in the form of changing cultural factors, has long been at the forefront of bioarchaeology, nature has at times been imagined as a fixed backdrop of human agency, and not an agency in and of itself. This is contrary to what many thinkers within feminist science studies have proposed. They seek to ally poststructural and postmodernist feminism with the new material turn, for the purpose of eliding divisions and allowing for a more accurate view of the exchange that happens between nature and culture (Alaimo 2008, p. 242). Where the body is concerned, biology is not superior in comparison to culture, both affecting equally how subjects form and change. As Gisli Palsson (2013, p. 24) elaborates, the biosocial approach does not deny nature any more than it elevates it, rather it denies its existence devoid of social influence.

So, the body is never a purely biological thing, and the social context and the experiences it has undergone should always be taken into consideration (Fuentes 2013, p. 55). A developmental systems theory built around the subject of bodily plasticity takes as its starting point the notion that engagements with cultural factors and social situations continually affect the body. Along this train of thought, the morphology of feet can be affected by various factors, including the choice of footwear, the paving of roads and the frequency of running to walking, all coming together in the form of a foot (Fuentes 2013, p. 48). As an avid supporter of developmental system's theory, Fausto-Sterling (2013, p. 79) too argues that bodies are actually, 'literally', and not just discursively, constructed, when experience gained from living in certain historical periods and specific cultural contexts leaves its mark and is made one with 'our very flesh'. This statement likely arises from Fausto-Sterling's (1992, p. 35, pp. 215–218) earlier observation that significant sex-related differences, such as height and strength, are clearest in societies, which are strictly structured according to gender, where women's activities since infancy are the most limited. In comparison, as Fausto-Sterling points out, in societies where the take on social roles is more open, sex-related differences are significantly diminished, in some cases even disappearing entirely. So, rather than thinking that biology affects social conduct in any straightforward way, it is fruitful to think that behaviour, gender performance at that, can significantly and meaningfully affect physiology (Fausto-Sterling 1992, p. 8).

As archaeologist Joanna Sofaer (2006, p. 60; 2011, p. 299) has pointed out, humans as biosocial subjects are affected by their cultural world, meaning that their bodily selves are ‘nexus-points’ for biological processes and cultural practices. In other words, bodies are where entanglements happen. They carry marks indicative of their social history, including the activities bodies carry out, from work to eating habits. Gendered practices such as the manner of moving, and work detail, when governed by gender, produce gendered bodies that are ‘gendered in socially and temporally specific ways’ (Sofaer 2006, p. 113). As Sofaer (2011, pp. 294–295) concludes, it is culturally specific how humans grow, mature and change, the role of culture being that of a ‘mediator’ in the developmental process. Ultimately to Sofaer this means that changes observable in skeletal tissue arise from experiences that do not happen absent contact with cultural forces but are in fact prompted by the body’s interaction with its social and physical surroundings. These experiences are what causes bone and tissue to be modified. What can be gleaned from this is that the engagement with social life, gendered activity and a gendered way of life transforms the body down to the bones and beyond. This engagement extends to other material bodies besides human ones, as Sofaer (2006, p. 136) and Harris and Cipolla (2017, p. 106), for example, have pointed out. To them the importance of items in making gender and the mutually transformative nature of the relationship between a gendered person and an item is an astute one. To Harris and Cipolla (2017, p. 106) ‘[a]s people engage with things, they transform themselves’. This is in line with Sofaer, who feels that objects are a part of the materiality of bodies, because items contribute to the body’s development. Effectively, the body, as a developmental process, incorporates items into itself through repetitive engagement. It is notable then, that people with different social identities may engage with different items, and this differential engagement is something that bodies carry with them because of developmental plasticity, thus providing an interesting avenue of investigation. As Sofaer (2006, p. 136) states, bodies that engage with different items are characterizable by a different process of ‘ontogeny’. The developmental paths differ in a significant way. Where gender is concerned, it is therefore necessary to investigate materiality at least three-fold: items, bodies, environment, all the while keeping in mind the inseparability of matter and meaning. This way holds potential in terms of archaeology.

Plasticity is not something that concerns bone and tissue only. It also supports the idea of epigenetic changes, meaning the activation of some genes due to environmental or other unknown factors, which can affect stature and growth, for example (Agarwal & Beauchesne

2011, p. 318). When questioning the divide between nature and culture and DNA's role as a genetic determinant, it is epigenetics that warrants some serious consideration. In terms of phenotypical plasticity, the fluidity of our genetic makeup, and the cultural aspects of our genetic heritage, epigenetics, the *beyond* genetics, has a lot to say. As we develop and live, our genome is biochemically and hormonally affected by our social environment, which can become immersed in our bodies (Ramirez-Goicoechea 2013, p. 73). This environmentally sensitive non-DNA molecular trait of regulating genes, activating some while deactivating others, can also become hereditary, though it remains unfixed into our DNA leaving no apparent changes (Palsson 2013, p. 29; Ramirez-Goicoechea 2013, p. 80). This sort of interaction with the environment is therefore not detectable though means utilising DNA. Though epigenetics poses problems from an archaeogenetic standpoint, its theoretical importance is not lessened as it amply communicates the permeability of bodies when it comes to environment. This enmeshing of materialities from nature and culture due to reciprocal permeability between humans and the environment is also what has inspired Stacy Alaimo (2008, p. 238; 2010, p. 2; see also Fredengren 2013, pp. 55–56) to instate a concept she calls trans-corporeality that understands bodies as 'hybrid zones'. In these zones materiality and abstraction intermingle, which is why, according to this line of thought, you cannot take the body out of the environment, nor the environment out of the body.

Simply, to think of separate human beings set against an equally separate backdrop, the environment, is obsolete. According to Tim Ingold's (2013, pp. 8–9) concept of biosocial becoming, entities are neither inherently biological nor cultural, but as emergent through their commingling. Instead of beings, we are looking at becomings in constant state of change never reaching an end point, more akin to works in progress than any finished biological or cultural entities. Furthermore, these biosocial entities are a part of a complex network of other similar becomings that influence one another. To better explain his concept of relational biosociality, Ingold (2013, pp. 10–11) evokes the allegory of a knot entangled with other knots, and the environment as a 'zone of interpretation', within which entities develop and come to be entangled further. This zone of interpretation, however, does not imply that it is solely people's interpretation of the world that is unique, but that environments themselves, due to changing materialities, are different from one another. In other words, the materialities themselves are different, not just people's perception of them (Alberti 2016, p. 45). Once again, we are confronted with the confluence of matter and meaning. What becomes important to understand in terms of biosociality, is that it is not about bringing two separate but complementary parts

together, but that the biological and the cultural were never separate to begin with and their separation reveals itself both artificial and false (Ingold 2013, p. 9). But despite this oneness, they are not synonymous. Similar to the convoluted relationship between sex and gender, one is not reducible or beholden to the other.

To conclude this section and to turn our gaze towards what is to come, a brief summary is in order: the paradox of sex, binary and multiple at the same time, brings to mind that sex as a representation of nature and as a representation of culture acts equally well on both accounts. This, in turn, seems to point out not only its ambivalence towards such designations, but also the irrelevance of them. Taking into account feminist quantum physicist Karen Barad's (2007, p. 48, p. 86) insight into the very nature of nature, when coming free from being mired in dualist representationalist thinking, a phenomenon such as sex finds itself transformed. The apparent bipotential nature of sex as both cultural and natural induces a shift from disparity to parity. Throughout this thesis, the attempt has been to point out that matter cannot be divorced from meaning nor sex from gender, as the concepts are convoluted and intermingled. Nature is queer and diverse and responds to culture, making way for it all the while culture is influenced by nature and its diverse queerness. As both are both, there is no need to divide them on ontological grounds for they are 'the same kind of thing' (Marshall & Alberti 2014, p. 22). The understanding, that we do not need to see nature and culture, nor sex and gender, as separate entities, pulls the proverbial rug from under the sex/gender model. But even as sex and gender share in the similarity that exists between nature and culture, there are differences between these two concepts. How does this work, exactly, to be different, yet the same? In the next chapter, the answer to this question is explored and the coming together of matter and meaning respective to sex and gender is investigated, in order to formulate an archaeologically serviceable and applicable account of sexgender.

4 Sexgender as a phenomenon

In this chapter we turn our gaze towards the relational onto-epistemology of new materialisms, in particular that introduced by feminist quantum physicist Karen Barad. In its wake, any justification of the divide between matter and meaning is obliterated allowing for a materialcultural framework to begin to emerge. Barad's theories have been applied to archaeology before (see for example Marshall & Alberti 2014), and as such, her contribution to the theoretical discussion, 'the ontological turn' as Marshall and Alberti (2014, p. 19) put it, and the relevance of her work to archaeological theory building has not gone unnoticed. A Baradian approach, where matter and meaning are in relation to one another and as such intertwined, is fundamental to the one presented in this thesis. In addition, such an approach is also better equipped to respond to the complexity of researching the past, both in terms of bodies and past human lives (Agarwal & Glencross 2011, p. 3). When the body is both cultural and natural, the body is not static in terms of its sexgender, but a phenomenon which undergoes transformations, especially in relation to other material-cultural variables, or categories. Therefore, in the second and final part of this chapter, the focus is directed towards the "intra-section" of social categories.

4.1. Karen Barad's phenomenal entanglements

New material feminist and quantum physicist Karen Barad, who has spent more than two decades studying the ideas of philosopher-physicist Niels Bohr, has pursued a theory that takes the intermingling between nature and culture as its forte 'without defining one against the other or holding either nature or culture as the fixed referent for understanding the other' (Barad 2007, p. 30). This makes her approach quite fascinating considering the topic of this thesis. To paraphrase Barad's quote, the relationship between sex and gender cannot be reductive nor deterministic, therefore sex does not act as a baseline onto which gender is always returned, making sex the thing that is needed in order to make gender intelligible. Were the situation reversed, sex cannot be reduced to gender either, which is where Barad veers a bit from Butler, holding that the materiality of the body and its meanings are inseparable, influenced and co-constituted by one another. Where before, despite numerous contradictions, the body was construed as either natural or cultural, but not *materialcultural* (Barad 2007, p. 135), according to Barad's argument, this is exactly what it is. Similarly to the wave and particle duality paradox introduced by Barad that has long haunted quantum physics, when it comes to an ontology of

division the body cannot contain both sex and gender, nature and culture, the binary and the plurality of gendered manifestations, because they are ‘incommensurable’ (see also Marshall & Alberti 2014, p. 32). Either the body is natural, or it is cultural, either it is sex that matters, or gender. However, Barad’s agential realism’s onto-epistemology, meaning the unification of the ways to know the world and its very extant nature can know no separation. They are entangled. This is why an approach that seeks to investigate gender must come to grips with gender’s confluence of matter-meaning.

What’s more, to Barad (2007, p. ix), ‘[t]o be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence’. What Barad opposes is in fact a representationalist view, where entities with inherent qualities are thought to exist ‘awaiting representation’ (Barad 2007, p. 46). According to Barad’s argument, a representationalist view holds that things exist as fixed entities, and as the act of representation is irrelevant to their existence, they exist in their inherent form regardless of it. Representation is merely an act of discovery, but through it, the thing being represented and the representation form a relationship of referential correspondence, but one that is still characterised by separability. Sex can therefore be construed as the fixed property of the body, and gender its cultural referent drawing its significance from it. To Barad, however, significance and matter are entangled, they cannot be considered separately because they bring one another into existence. In other words, they are co-constitutional, emerging together into *phenomena*, which is also why they do not exist separately prior to their entanglement. Barad terms this emerging as *intra-action*, and sees it happening by way of *diffraction* through a *diffraction apparatus*. Matter and meaning intra-acting, contra to interacting is significant, because to Barad (2007, p. 33) the word *inter* refers to fixed entities interacting all the while maintaining their independence. *Intra-action*, however, refers to mutual emergence, to co-constitution. In here, we can see a similarity of thought between biosocial becoming, the permeability of bodies and environments and Barad’s view. All hold on to the notion of inseparability, conveying an entangled rather than a vacuum-like existence, though Barad takes this entanglement a step farther in terms of co-emergence, and *intra-action*, instead of interaction.

Barad’s terminology is complex and there is plenty to be had, which is why a closer look is in order. The diffraction, which is central to Barad, contains both the apparatus and the pattern. Barad’s ‘diffraction apparatus’ (2007, p. 30) used to study the entanglements between matter

and meaning, the formation of which entails a lot of rethinking all around, is a thing that enforces the diffraction, the difference and the change – ‘the difference that matters’. What is important to understand, is that instead of measuring matter and its already existent inherent properties, revealing them through the measurement, apparatuses actually bring them into being as a diffraction pattern – a certain sort of difference attributable to the specificity of the apparatus, similar to the electrons referred to by Barad, whose state of being as either a wave or a particle is imposed based on the use of specific scientific measuring devices (Barad 2007, p. 19, pp. 104–106; Hollin et al. 2017, p. 921, p. 928). However, it is equally important to recognise that an apparatus can extend beyond any one physical thing or a measurement device; it can also contain, for example, the researcher, the methods and conditions of the experiment, the concepts according to which interpretative models are formulated, other conceptual frameworks and theories behind the experiment, as well as politics and economics that can affect academic finances (Marshall & Alberti 2014, p. 27; Fredengren 2013, p. 63). This list is not exhaustive and could be continued further, but the point is that technical implements and equipment alone do not define an apparatus. Concepts, though, are integral to apparatuses and, with regards to them, it is important to realise that, according to an agential realist account, existence of a world beyond discourse is never denied, but as Susan Hekman (2008, p. 109) states, it is accessed through our perspectives, concepts and theories of it. While there is a world to be known, it is known through our concepts, even though, granted, matter is agentic in that it has a way of affecting the ways it is conceptualised (Hekman 2008, p. 110, p. 112). So, concepts are a part of the diffraction apparatus, and as discursive concepts have a tendency to not only convey knowledge but also constrain it to some extent, apparatuses are also exclusionary devices (Barad 2007, p. 137, p. 148). Taking all of this onboard, the nature of the apparatus is such that it produces the determinations that seem common sense and the differences, or properties, on which the divisions are based (Barad 2007, p. 169, p. 232). In effect, the apparatuses create what they measure, being intimately involved in the phenomena they produce, while the measuring experiment becomes self-fulfilling, creating that which it assumes as truth.

So, to recap, the world that exists is accessed through our concepts and discursive practices, which come together with all kinds of things to form the material-discursive phenomenon that is the apparatus. The other phenomenon, the diffraction pattern, that is, the object of enquiry in a research setting is therefore the product of these agencies intra-acting with one another, meaning that the apparatus takes active part in the production of the diffraction-pattern-cum-

phenomenon, producing its specific form and qualities (Marshall & Alberti 2014, p. 26). This means, that what is in fact investigated, is not the properties belonging to a distinct, individual object, but the phenomenon. This is fervently stressed by Barad. According to an agential realist account, there can be no distinct entities that are separated due to innate differences, but different differences are produced. This production also includes the human bodies, whose properties and boundaries do not pre-exist the phenomenon, but become to be obtained through the aforescribed intra-action (Barad 2007, p. 172). Interestingly, Sofaer (2006, pp. 48–49, p. 51), for one, has suggested that, as an approach, bodies without boundaries is one well suited for archaeology, because archaeological skeletal remains lack skin and flesh; as such, they are embedded in the mortuary setting, subsuming the artefacts and associated grave goods and thus defying definition in terms of their boundaries. This is encouraging.

An agential realist account which understands properties to be produced rather than inherent, as noted by Barad herself (2007, p. 106), is contrary to the unfathomable idea of scientific analyses and investigative conditions affecting the thing being measured, because their inherent nature is thought to be fixed, and revealable through measurements and experiments. However, determinacy and the inherence of properties relating to both words and things is brought into question, when Barad (2007, p. 138, p. 150) points out that even as things can be understood to lack the boundaries and properties thought to be intrinsic and which thus enable determination, words are similarly unclear, being prone to variable definitions. Determinations rely on fixed properties thought to be inherent parts of bodies, similar to how categories are taught to be self-explanatory, supposedly representing universal factors, but determinacy pertaining to both properties and boundaries belong to the phenomenon and no place else (Barad 2007, p. 148). When it comes to the body, the material-discursive phenomenon that is sexgender is indeterminate. In other words, sex and gender are not inherent to the body, but only produced through the diffraction apparatus, which can refer to the whole analytical process of sex determination, meaning that sex and gender come to be determined through the determination. Similarly, are the categories of male and female and their difference created, through the investigative process (Marshall & Alberti 2014, p. 34).

How the indeterminate gains determinacy is by means of the ‘agential cut’ (Barad 2007, p. 202, p. 345). To Barad, when the agential cut is made, ‘the objective referent’ and the ‘agencies of observation’ are produced within the phenomenon, meaning that the phenomenon is constituted of the thing being observed, usually known as the object, and the things which make it

intelligible. What is important in terms of indeterminacy is that it concerns both the object and the agencies of observation, meaning that depending on the arrangement, both have the capabilities to be either. This open potentiality is illustrated by Bohr's example of a person traversing a dark room with the help of a stick, whereupon the stick can act equally well as an agency of observation or an object, but not both at the same time (Barad 2007, p. 52, pp. 154–157). The agential cut determines which is which. Along this train of thought, then, we can either approach sex through an agency of observation, a determination method for example, whereby sex acts as the object of investigation, or sex could be the instrument of observation, the “stick”. In this instance, sex as the stick is used to investigate the room, or rather the body, granting specific information about it. Sex would then be what makes the body intelligible. While agencies of observation can include everything from the measurements device to the people who interpret the results or evaluate the experiment, it is yet again important to remember that the information gained does not inform about the object, as Barad points out (2007, p. 203). This is because the object does not pre-exist its phenomenon as an independent distinct entity, but instead relays information about the ‘objective referent’, in other words – the phenomenon (Barad 2007, p. 203). Though it might be difficult to understand the mechanics behind the agential cut, how agencies of observation come to be distinguished from the object due to their indeterminacy, this happens by way of causality. In other words, agencies of observation acquire ‘marks left on bodies’, which is Barad's (2007, p. 178) way of referring to the measurement results that the object causes. The object is therefore the cause, and the agencies of observation are the effect.

As concepts that are of human invention can be included in the apparatus and therefore also the agencies of observation, thus constituting an active part in the production of the phenomenon, the issue of objectivity arises. Measurement results are never neutral. However, rethinking of the concept of objectivity comes through in Barad's writings in that she opts for its relocation beyond epistemology. To put it succinctly, objectivity does not mean that the scientist is able to reach and reveal what is objective about the object; it does not mean that by way of the scientific process, be it measurement or something else, the scientist can capture inherent properties and do so objectively, somehow as an outsider observer not intrinsically involved in the process (Barad 2007, p. 197). Objectivity to Barad is ‘reconfigured’, referring to accountability for the agential cuts that are made and the objective referents that in place of objects provide knowledge (Barad 2007, p. 178). Even though humans are not solely responsible for phenomena, they are involved in ‘the larger material arrangement’, which is

why to Barad (2007, p. 178, p. 232) both the apparatus and agencies of observation must be accounted for lest objectivity be put on the chopping block. Similar ideas have been expressed by Joan Gero (2015, p. 6, p. 8) who disagrees that only the absolute elision of all subjective-seeming accounts can safeguard the certitude of results. Instead, Gero is of the opinion that archaeology does not have to depend on the obscurity of human agency in knowledge production – an idea, which resemblances the account presented by Barad.

If sex determination, that sets the identification of male and female forms as its outcome, is taken as proof of the presence of an attestable sex binary, then what happens, when in Baradian terms, the process of sex determination can be said to produce the very binary regarded as evidence? Same as the wave-particle duality paradox introduced by Barad (2007, pp. 120–121), it can be argued that sex and gender are mutually exclusive phenomena that are produced, and neither refers to inherent qualities. Difference is therefore the result of phenomena, meaning that the body in its sexgender knows no difference, but as it becomes to be investigated, and comes to be known and determined, then voila – we have a difference. The production of sex therefore produces difference, but importantly, through the process of sexing, when sex-as-difference emerges, sex is locked in place, disallowing other kinds of states of being to manifest, therefore excluding other differences. Sex and gender are both facets of the same, both are able to grant knowledge, but for one to be determined, the other has to be undetermined. In other words, sex determination cannot grant information about gender. This is contrary to how the sex/gender model operates. Furthermore, a determined binary sex excludes other alternatives because it, as a concept, is constraining. In the case of the study of ancient DNA for example, this means that the very means at our disposal are exclusionary devices that leave uninvestigated and untapped both the genetic and the epigenetic varieties that fall beyond our current scope of understanding. To bring into being some materialities and realities while excluding other ‘possible alternatives’ also invokes the question of ethics (Hollin et al. 2017, p. 939). What differences are allowed to matter, and which are ‘excluded from mattering’ (Barad 2007, p. 57) are important questions with no easy answers, but they are questions that deserve to be asked. This is also why Barad’s onto-epistemology can be rightfully referred to as ethico-onto-epistemology (see Barad 2007, p. 90, p. 364).

As everyone is no doubt at this point fully aware, in conventional biological archaeologies, it has been thought that the material provides access to gender, which is why sex determination is a necessary first step of all possible analyses, even ones extending to social variables. When

considering that the environment, even our cultural environment, is imbued in the body, and that gendered lifeways transform matter through epigenetics and the plasticity of the body, and that properties co-constitute and emerge entangled through the investigative process, then matter and meaning should not be thought to exist distinct from one another as separate entities. Though gender has been conceived as the meaning to sex's matter, all phenomena are constitutive of both. With regards to phenomena, the crux of the matter is that sex cannot be a fixed predetermined binary property of a body, because it is an effect of the agential cut, produced in the process of investigation, where determinacy comes to be determined. As Barad says, the agential cut cannot pre-exist the phenomena. Sexgender is understandable through the intra-action of matter and meaning, a convoluted mesh of discourse, concepts, items, practices, bodies, through which the phenomenon is produced. However, through the agential cut, the investigative process brings one facet into being, and fixes the properties within that phenomenon, seemingly making it impossible to study the phenomenon holistically. During the process of sex determination, with sex as the agency of observation, the agential cut prevents gender from being examined, because while sex is determined, gender remains undetermined. Once the boundaries and properties have been produced and the determinations made, it is impossible to treat these synonymously or collapse them. The other possibility is virtually excluded. Paradoxically then, though sexgender are together in a state of boundaryless and indeterminate possibility, when investigated, they become separated.

This seems to present a significant hurdle, but knowing what we now know, could not this problem be circumvented by approaching the body from the standpoint of gender, with the full understanding that what we are dealing with is an entangled phenomenon and therefore also material and able to provide clues in terms of how the physicality of the body was understood? Bioarchaeologist Sofaer (2006, p. 113), almost echoing Butler, has stated that sex can be 'regarded as one of a number of elements of gender'. This statement also communicates something along the lines of Barad, in that materiality is implicit in gender, thereby expressing that the path to sex is by way of gender. The body's materiality thusly approached, gender offering us a way into matter, can be considered a good front from which to begin a nonbinary, matter-inclusive investigation into past lives. However, in archaeology, because of its seeming elusiveness, investigating gender has always been somewhat tricky, without any clear-cut methods at our disposal. Barring any sex/gender model determinism to guide interpretation, how is gender to be "determined"? Though it must be remarked that with gender determined, sex must remain undetermined, but such as it has been, this might prove to be a blessing in

disguise, a valid recourse in the face of binarism. And if gender must become determined in order for it to be approached archaeologically, intersectionality might prove handy in this regard. Not only as the means through which categories are made multidimensional, intersectionality can act as an interpretative tool granting access to gender, the phenomenon, through the “intra-section” – adopting here wording favoured by Barad – where gender gains boundaries by sexgender intra-secting with other ‘material forces’ (Barad 2007, p. 66, p. 226) to produce new differences, new consequential meanings. But though this is all well and good, the appearance of this, in terms of it being approachable and recognisable in the archaeological record and within reach to archaeological investigation, is another matter. How does this intra-section appear and manifest itself, and how is the gender phenomenon defined? Next, a closer inspection on the process of intersectionality of social variables as a way to understand and investigate gender is in order.

4.2. Intra-section of material forces

When it comes to archaeology, as discussed in chapter two, intersectionality has proved very useful, providing a helpful tool to understand the complexity and pitfalls regarding the categorisation process. It has shown that all social actors belong to many and different groups, and some become more salient and fundamental depending on context. The purpose of this section is to continue this discussion but most of all, bring home the notion that social categories intra-acting together should be thought of as *relata*, relationally influencing one another in significant but complex ways. As a social category, or in Barad’s term as a ‘material force’, gender is contextual, dynamic and most of all relative. It does not emerge nor exist in a vacuum, which is why gender is always done differently depending on intersecting social locations (Butler 1990, pp. 13–14; Fausto-Sterling 2000, p. 244). What we can glean from this is that a body and its identities cannot be likened to an ‘assembly-line’ assemblage, where these various identities function separate as parallel gears, working in their own pace and doing their own thing, but as Barad (2007, pp. 228–229) states, these social variables, these different phenomena, work with each other, affecting the other’s operation, as it were. This is what it means for social variables to intersect, or in Baradian terms, phenomena to “intra-sect”.

Following Barad, all categories can be construed as phenomena, that do not reflect naturally occurring properties or essential essences, but indeterminate potentials. As such, the investigative process creates categories according to properties and boundaries that were never

already there as inherent and fixed, but ones that are produced. However, distinct categorisation tends to dispel the relational nature of categories and misses the mark in this regard, making the social categories seem simple and clear-cut, which is why intersectionality becomes vital. If we recall what was previously talked about concerning the intersectional anti-categorical approach's assertion towards the impossibility of empirically distinguishing between categories, this viewpoint is understandable, when we take into consideration that what we are witnessing is not separate and fixed entities interacting. In fact, it is the co-constitution of social variables, phenomena intra-secting with every other category, so that categories are always relational and intra-sectional. However, the absolute inability to detect social variables is contestable, because even though gender is not a separate analytical category in and of itself, but a complex phenomenon, it is material and made accessible through the determination, the categorisation process. Hence, Barad's use of the term material force becomes quite sensible. Let's look at this process of materialisation and determinacy a bit further.

As discussed in the last section, approaching the body through gender would be plausible considering that the body is constitutive of sexgender, and that gender as a phenomenon is material and its meaning is fluid and multiple in its potentiality, but for this to be a possibility, gender must be made determined. How does this happen exactly? As demonstrated, Barad rejects the notion that social variables are somehow determinable on their own, but, as Barad is also of the mind that it requires more than simply sorting out how social variables, each as a separate strand, interact to understand society (because their interaction is, in fact, intra-action of indistinct entities with no inherent properties or boundaries), it is necessary to return briefly to phenomena and diffractions. Even more so, as to Donna Haraway (1988, p. 596), intersection acts as the locus where differences as diffraction patterns emerge. As stated by Melanie Sehgal (2014, p. 189), central to diffractions are effects and consequences, meaning that even as diffraction apparatuses cause differences as patterns, they also cause consequences, or 'consequential meanings' in the words of Haraway (as cited in Sehgal 2014, p. 188). This seems to be in line with Barad (2007, p. 72) when she states that the difference that emerges by way of the diffraction apparatus, 'the pattern' is a 'difference that matters' for the very reason of the consequences it enacts. It is, in other words, consequential – producing further differences and changes in the world. In the words of Butler (1993, p. 7), social aspects such as gender, social age, ethnicity and so forth, are not inherent and fixed attributes that belong to persons, but what comes into being through 'differentiating relations' people act out. As social identities come into contact with one another, as they are affected by one another, they change. The

intelligibility of these material forces, these categories, is necessarily incumbent on other categories (Barad 2007, p. 223). In other words, their intelligibility rises out of their relation to other categories. What this all means, is that social categories, these material forces produced through the intra-section of sexgendered bodies and other social variables come together in a transformative way. They are thus differences that in their intra-section produce further differences – more social identities.

How this understanding helps with determining material forces is due to the notion that intra-action with other intra-sectional variables *materialises* boundaries, which are the product of both matter and meaning, similar to what Barad has expressed (Haraway 1988, p. 595, emphasis added). In other words, differences produced through the intra-section are differences that define themselves and find their boundaries in relation to the other differences that have been produced. If one brings to mind Barad's view on boundaries, and how phenomena are boundaryless, but when determined, they gain boundaries, then the process of intra-section and a subsequent intersectional analysis is, by its very definition, determining. In other words, categorisation that sets embodied states of being in comparison with one another, whereupon a difference emerges, is a boundary making practice (Barad 2007, p. 158). In this case, intersectionality as an agency of observation is the interpretive tool taking part in this process that allows social phenomena determination, that makes them intelligible, and examination. It follows, that intra-sectionality where axes of differentiation intra-act to bring one another into being and where they therefore affect each other's expression is the catalyst through which mutual shaping emerges as gender, as this kind of consequential meaning that Haraway mentioned. But what's more, when sexgender of the body intra-sects with other material-discursive phenomena, with gender as the result, its emergence is always different due to the intra-secting forces. Though the boundaries between groups may be invisible as such, because groups exist as embodied, they are material and thus, explorable. This idea is applicable even regarding societies, which exhibit genderlessness. To illustrate, if gender is what emerges through the intra-section of the indeterminate sexgender of the body with other phenomena, making it a performative doing, activity and a process in the becoming, and if gender is indeed present in any given society and that society matters in terms of gender, then it follows that gender is made material. When gender is determined, it achieves boundaries – it “materializes” as Haraway stated. So, when faced with a lack of such materialisation, no boundaries or variety comes across, then gender might not factor in. Within the phenomenon where matter and meaning co-constitute one another, even a meaning that points towards gender not mattering is

a meaning. The popular saying “a difference that makes no difference, is no difference”, which is generally attributed to the 19th century American Philosopher William James (see the original expression in James 1984, p. xiii), can be taken to mean that a difference, be it a morphological one, that makes no difference, does not *matter* – it leaves no traces. Along this train of thought even genderlessness, such as invoked earlier by Oyewumi, would be an integral part of the potentiality pertaining to the phenomenon of sexgender. Of note is that matter is not neglected or forgotten but is very much taken into consideration and integrated in the phenomenon.

With regards to the boundaries of these material forces, there remains one crucial point that must be addressed. I will return briefly to the previously broached subject of the anti-categorical approaches’ reasoning towards eschewing the use of social categories. Even though the boundaries materialising due to the intra-action with other intra-sectional variables challenges the impossibility of differentiating social categories from other social categories, there are certainly difficulties present. This is because these boundaries born when different differences come together can be very challenging to detect. The phenomena themselves are hard to define and isolate from one another, at least when it comes to doing so decisively. This is because a social phenomenon is, first and foremost, a ‘vague’ one (Sørensen 2016). Let me elaborate on this. Archaeologist Tim Flohr Sørensen (2016, p. 759) contends that, when it comes to social phenomena, vagueness must be accounted for as an important constitutive factor and ‘a necessary aspect of all social realities’. Even though Sørensen does not refer to Barad in his use of phenomena, his account is still applicable to the situation at hand. As such, vagueness comes to present itself as a force to be reckoned with in relation to the material forces that social categories are. But even as Sørensen (2016, p. 747, p. 750) regards vagueness as a characteristic adhering to complex and fuzzy social phenomena, he also associates it with transformations that these phenomena tend to undertake as well as a lack of clearly definable boundaries. All of this carries a certain sort of familiarity. One could argue, then, that sexgender, whose matter and meaning affect one another in a convoluted manner carries the trademarks required to be characterised as vague. Especially, as the lack of boundaries that sexgender exhibits is the very epitome when it comes to these sort of vague phenomena. This vagueness also extends into gender, which transforms with every intra-section, where the boundaries remain difficult to identify and establish. When we are determining gender by way of intersectionality, though boundaries do come to be manifested, these boundaries are, in actuality, characterised by fuzziness in that it is difficult to tell which affects which as social phenomena can significantly affect one another. As a diverse, complex and relational materialcultural phenomenon, gender

should be counted among those of which vagueness is a part, especially as it comes to concern how these social phenomena are approached archaeologically. This topic will be discussed further in chapter five.

If we take what we know from the previous sections, pluralism is best entertained through gender, with the full understanding that gender is a phenomenon and a product of sexgender intra-acting and intra-secting with other phenomena, which is why matter is integral to its becoming. Considering this “phenomenal” nature of categories, as well as the certain shortcomings of the previously discussed intersectional approaches, it might be prudent to devise a hybrid approach. It, for one, would endorse intra-group diversity as well as cultural and temporal specificity while understanding difference to emerge within the intra-action of intra-secting axes of differentiation. Intra-sectionality would be understood as a diffraction apparatus, which causes diffraction patterns and through which it is possible to engage with multiplicity in its full potential— where the plasticity, permeability and trans-corporeality of matter emerge transformed with meaning in their biosocial becoming. Intersectionality, in turn, would be construed as determining, being part of the agential cut – an agency of observation, which provides intelligibility. While rejecting universalism, homogeneity, fixity, essentialism and assumed binarism, this approach would retain criticality and scepticism towards categories, questioning their saliency. The approach would deem important that how bodies come to be shaped may not fall neatly into two categories, but would approach plastic developments openly, to see what rises out of the analyses. This approach that understands gender as a phenomenon, a process and action, takes the material, the patterns of archaeologically perceptible modifications as telling of practices of which gender may be a factor, so that without resorting to binary assumptions in terms of stereotypical gender roles, one is able to interpret the gendered actions of past groups of people. In addition, it can reveal which groups, all or some, were partaking in this practice. The differences that emerge from the data do not depend on sex, so they need not be binary, and only appear thus, if a binary system is relevant. Finally, this approach would hold with the ethico-onto-epistemology of the scientific process, showing accountability towards what comes to matter, and what is excluded. In the next chapter this insight will be put to use with regards to the mortuary setting, which will be considered from a materialcultural new materialist Baradian perspective, using an intra-sectional hybrid approach, with an ambiguity-embracing twist.

5 Gender and the mortuary setting

In this section, we will cast a much needed look on the mortuary setting, which is counted among the most important contexts through which ideas about gender are brought to fruition. However, it is also where problems regarding the sex/gender model are clearly evident when working with artefacts, as archaeologists are wont to do. It is here that the understanding of gender has developed through the interplay between sexed mortuary remains and gendered items, which conventionally have been interpreted through a binary lens using the sex/gender model. In effect, the binary gendered implications created through the sexing process are transferred from bodies to items, reproduced in the mortuary setting, which is where they are brought to true and lasting life by being subsumed from specialist fields into the wider archaeological discourse. The binary implicit in the sex/gender model also tends to be imposed on the whole mortuary assemblage. By cross examining sex determinations with body positions, treatments, and the wealth of grave goods, patterns based on regularities are established and anomalies identified, which are often at least initially, barring evidence to the contrary, considered from the standpoint of sex having influenced their configuration. The assumptions guiding analyses have not been problematised, nor has intersectionality, the intra-action and intra-section of phenomena been given their due cause. Though it is clear that the whole of mortuary assemblage can have many meanings, and none of them easily parsed, consideration for the whole assemblage and embrative engagement with its various ambiguities have been equally missing. This means situations, where the messiness of the mortuary setting may be due to a more or less fixed gender binary manifesting role negotiation and gender changes that happen throughout the life course, during which gender alters in tune with changing intra-sections; ambiguity may also stem from genders being multiple, or fluid in which a fluid binary system of gender sanctions gender shifts, liminality and androgyny.

As this chapter will benefit from a more tangible example of how a feminist informed materialcultural approach can affect archaeological enquiry, the renowned case of the female Viking warrior will be analysed from an intersectional materialcultural Baradian perspective, taking note of the different scenarios described above. The chosen case study was published in 2017 in American journal of physical anthropology under the title ‘A female Viking warrior confirmed by genomics’ (Hedenstierna-Jonson et al. 2017). As it happens, it needs little in the way of introduction, having been widely circulated and extensively covered in various media platforms ever since its publication (see more from Källén et al. 2019, p. 75). The article

concerns a warrior burial Bj 581 in a Viking Age urban centre of Birka, Sweden, which the authors revisit using genetics and isotope analyses both. As it turns out, the authors are justified in their efforts to communicate that re-examinations are good practice, especially when it comes to verifying debated cases. Though the remains were analysed in 2014 using osteoarchaeological methods and were even then identified as female, the results were considered dubious as they associated female remains with rich burial furnishings and the trappings of a seemingly high status warrior. These items in question consisted of a sword, an axe, a spear, a knife, arrows, shields and gaming pieces; the skeletal remains were also accompanied with the remains of two horses. As genetics are frequently considered more reliable than osteology, the results of the re-analysis presented in the article thus “confirmed” that the individual in the burial Bj 581 was indeed a female of a foreign origin, lending credence to the interpretations that associate females with warriorhood. In accordance with this, the message conveyed by the authors quite simply states that women could become warriors in their own right, which is why it is justifiable to renounce stereotypical assumptions concerning women’s roles in the past.

5.1. On binarism, determinism and intersectional variation in the mortuary setting

As our case study demonstrates, the dead go seldom stripped, unadorned and unaccompanied to their final resting place when it comes to the Iron Age in Scandinavia, though there are certainly variations to be found in any area or era, past or present. However, a common observation among archaeologists studying past funeral practices, is that the dead are often ‘dressed’ with full funerary regalia, from clothing to tools to body positioning, all of which are understood to convey meaning of some kind (Pearson 1999, p. 9). A conventional pathway to gender is to investigate these very dressings, these ‘trappings of gender’ (Arnold 2002, p. 241), by correlating them to sexed skeletons, which results in sexed males and females who are associated with gender appropriate items (Ghisleni, Jordan & Fiocoprile 2016, p. 768). The certain kinds of grave goods thought to infer gender, the most banal example being that of jewellery versus swords or tools are imbued with assumptions about masculinity and femininity (Arnold 2002, p. 241). In other words, functional items convey masculinity while items of beautification are “naturally” feminine (Lappalainen 2007, p. 7). This reductive addition of what equals which goes to show that assumed binary models are just as bad for items as they are for the people associated with them. As Harris and Cipolla (2017, p. 58) have suggested, models of thought connecting items to sexed skeletons are frequently essentialist, allotting

universality to occupations identified as feminine or masculine in certain present-day and historical settings. Inferring maleness from weapons, then, is troublesome: both in terms of its disregard for martial roles for female bodied individuals, but also for its reductivity towards all the available social roles of male-bodied individuals, of which a martial role is just a one (Arnold 2016, p. 841). At the onset then, we can state that our case example of a female Viking warrior has avoided this particular pitfall in a stellar way, seeing past the essentialist and presentist assumptions, revealing that a female form is associable with items of a martial nature.

However, despite these praiseworthy traits, there are some problems with the case, the most blatant misdemeanour of which has to do with the two-sex/two-gender model type determinism that saturates the study. The article showcases the universality and determinism that comes very naturally to studies of scientific origin, conflating the terms man and male and female and woman quite nonchalantly, and invoking the dreaded ‘female gender’ (Hedenstierna-Jonson et al. 2017, p. 855, p. 857). This is done without ever endeavouring to either problematise the relationship between these two or asserting why in this case synonymous use would be suitable. That these sorts of practices are to be found is in no way surprising, considering the insights concerning scientific studies expressed namely in chapter three. But if we recall that sex is produced through the diffraction apparatus, determined through the determination, when the categories male and female are similarly created, we also remember that once sex has been determined, gender must remain undetermined. Therefore, conflation such as this must be understood to be impossible and to talk of “female gender” like this is incongruous. The apparatus in use here, where the sex/gender model is implicit on a conceptual level, is something that bioarchaeologist Pamela Geller (2009a) calls the ‘biomedical bodyscape’. Its problems regarding the study of bodies centre around the idea that ‘a bodyscape produces and sustains cultural norms and exclusionary beliefs’, meaning that it takes for granted many assumptions concerning sex and gender which are not only presentist but also commonsensical (Geller 2009a, p. 504, p. 506). With the sex/gender model firmly embedded in the apparatus, these assumptions find themselves seamlessly reproduced in the data as well as the results of the study, which is why binary divisions are imminent. Hence, when biological archaeological research gives notice to social categories and turns its investigative eye to identities, at the heart of it still lies the problem of an assumed connection that links biology to social identity (Glencross 2011, p. 392). As apparatuses are also exclusionary devices, the one in use here dismisses gender diversity beyond the binary. The crux of the matter as stated by Jones (2011, p. 187) is this: ‘[h]ow burials are sexed and the specific concepts that are applied in this process

can impose structure upon the data, obscuring its genuine composition'. Possible presence of nonbinary is overlooked.

The study is also guilty of taking the universality of some categories for granted. For example, it is prudent to question the transcultural and transhistorical presumption that seems to characterise gender, as it is understood in western scientific academia. Studies have shown that some cultures indeed lack the social categories which western thought would liken to the categories man and woman (Oyewumi 1998, pp. 1053–1054; Williamson 2011; other examples see Weismantel 2013). As voiced by Oyewumi (1998, p. 1054), assumptions governing the study of gender lead to men and women being written into every cultural account while gender must always stand as a force to be reckoned with. What Oyewumi means is that when we are talking about men and women, we are operating on a level of assumed truths. As Oyewumi (1998, p. 1057) states, it is first necessary to establish 'the cultural cues necessary to identify the social categories "man" and "woman" in a particular cultural location'. The very notion that gender must always be a structuring principle in every society without first establishing the veracity of such a claim, speaks to Oyewumi strongly of determinism, and no wonder. For if we insist that gender is a constant, same as sex is a constant, the category woman becomes naturalised (Oyewumi 1998, p. 1055). When working with past societies some analytical categories seem necessary, which is why it is also necessary to entertain some assumptions, albeit speculative ones. But if we recall intersectionality's predisposition towards the questioning of categories and the subject of a priori categorisation that is eschewed within the field, relevancy becomes paramount. In other words, the investigation into relevance becomes relevant. In archaeology, then, the rejection of a priori use of categories is transformed into a healthy scepticism towards them becoming more about targeting our assumptions about what the categories should be. This means, most of all, that categories must be understood as particularistic, and therefore must be subjected to re-examination at every given situation. Rather than seeking to label categories and then sort people into them, intersecting factors prove fruitful in raising interesting groupings from the data, meaning it could be more beneficial to try to investigate the different sorts of people based on the 'appropriate treatment' seemingly accorded to them (Haughton 2018, p. 66). In other words, the salience of all social variables and the way that categories are structured, which groups they house, should not be implicitly accepted, but subjected to investigation and rendered suspect to the same scrutiny, instead of presumed to matter.

In addition to determinism and taking categories at face value, where our case is clearly lacking is in showcasing understanding towards intersectionality. The authors working with the female Viking warrior case, who actually reference intersectionality, seem to have, at best, misunderstood, at worst, completely disregarded certain key points about it. In particular, they state that it is mostly about how in certain contexts different social categories matter more (Hedenstierna-Jonson et al. 2017, p. 858). As discussed previously, it is true that gender need not function as the primary social difference according to which the burial setting is arranged, and according to which it is best understood. As a 'dependent variable' (Arnold 2016, p. 850), it is intersectionally linked to other axes of difference, some of which may hold more primacy in the mortuary setting. But while this is certainly true, categories must be understood as multi-group units, whose groups also showcase significant intra-group variability. If we, for example, were to assume that the prevalent gender system is a binary one and that man and woman are relevant categories for the case at hand, what is important to understand, is that gender is a variant thing. Let's look at this a bit further. As discussed, one of the strengths of an intersectional interrogation lies in its pursuit towards dispelling the homogenisation of categories. This is why such an approach is well suited to be applied to the mortuary setting, where this sort of practice is commonplace. With regards to the mortuary treatment of individuals, it is often the case that research questions have revolved around the issue of power relations in terms of status between males and females (Armstrong 1998; Brück 2009; Cook 1981; Zuckerman 2017; see also Levy 1999; 2006). This goes to show that from among the samples recovered and identified, which sex received the most prestige in the form of interred grave goods is deemed a valid research question, demonstrating that males versus females seems to be hardwired into our understanding of what constitutes a relevant setting from which to start the investigation on gender. However, monolithic categories are at work, when, for example, the high status of all male bodied individuals is deduced based on them being more frequently found inhumed rather than cremated (see Brück 2009). If a portion of males received more grave goods or higher energy-cost burials than most females, it is reasonable to ponder if something more is at work than simply males versus females. Though at first glance the data alludes to an unequal status and differential treatment seemingly based on sex, the situation is likely much more complex. Failure to take intra-categorical, intra-group diversity into account has produced the appearance of monolithic categories, though the categories are far from it.

Another example concerns objects found solely or often in the burials of certain sexed individuals, which are then assigned a gendered status. This matter pertains to swords or other fighting gear for example, as well as ornamental items, such as bronze hair spirals (see Sosna, Galeta & Sládek 2008, p. 351). If we look at this sort of gendering on a general level, these spirals are believed to reflect a general “female” identity, even though not all female bodied individuals are found with them. It is never addressed what the lack of this female identifying item says about the other female bodied individuals. It is just expected to extend to them as well, by virtue of sharing the same female form. However, this variation evident in the mortuary setting is something that should be of great concern, because it is indeed variation that translates to boundaries between different groups of people (Stutz 2010, p. 37). As social intra-action is the force through which social groups become different, the boundaries between groups are “materialized” through the variation, thereby making themselves approachable. If we take our case study of the female Viking warrior, even as the authors (Hedenstierna-Jonson et al. 2017, p. 857) state that ‘[q]uestions of biological sex, gender and social roles are complex’, they conclude that based on this ‘burial of a high ranking female Viking warrior (...) that women, indeed, were able to be full members of male dominated spheres’. Disregarding here the problems relating to determinism addressed previously, it is quite possible that what we are witnessing here is a very particularistic position of a female-bodied individual of a certain age and social standing (barring the effects of other consequential unaccounted for variables), which is extended to concern females, ergo women as a whole, in effect homogenising the category. As warned by Gero (2015, p. 15), single studies should be wary of inadvertently imposing broader claims by way of ‘stretching’ the data, making claims on a larger scale. Hence, our case study is subject to some criticism, as based on this single grave, its conclusions are extended to women as a whole.

Of particular concern here is the variable, elite, invoked by the study as Hedenstierna-Jonson et al. (2017, p. 857) bring forward that the female in question may have enjoyed a privileged elite status. Though rank and status are available for investigation through the intersection of sexgender and health, due to the embodiment of wealth differences (Joyce 2017, p. 8), elite status has not been investigated through these means with regards to the Viking case. Rather it seems to have been inferred based on mobility and also accepted by virtue of the richness of the grave goods and, perhaps the mere existence of the grave itself, which some deem telling in terms of high status (see Lang 2011, pp. 113–114). This, however, is of minor note in comparison to the statement that Hedenstierna-Jonson et al. make in reference to

intersectionality; they state that an intersectional approach, which may hold class to be more important in a mortuary setting than the morphology of the body, ‘takes away the agency of the buried female’ (2017, p. 858). This is nonsensical. Elite status, in intersectional terms, must be accounted for, as it can be consequential in terms of gender. In other words, class that intra-sects with sexgender may produce gendered expressions which are variable, especially with regards to gender roles; Bettina Arnold (2002, p. 242) for one, has found that there may be a connection between high status and gender variant practice in the form of acceptable context-specific role reversal, for example. Furthermore, as variables such as age and ability in addition to class intra-sect with sexgender, what emerges as gender and which is the most significant at any one time, is thus different. This, for example, is why younger members of a society may be differently gendered than their adult or senior counterparts, and further differences are produced by other variables. Taking into consideration that elite status might be a consequential factor that together with sexgender of the body produces an attribution of gender where role negotiations and gender role reversals, whether long-term or temporary, become possible, is central to understanding the mortuary setting and the gender system in question. Gender’s variability in a binary setting becomes possible through different intra-secting variables. This does not lessen agency, only situates it with more clearly within a particular intra-section. Asserting that such gender negotiation and reversal may not have been possible for all individuals sharing bodily traits, showcases diversity while also permitting the concession that it certainly was possible for some.

Intersectionally speaking, then, what these examples show is neglect for the multiple groups constituting categories. This is why it is difficult to conceive that an item’s singular association with individuals sharing some key bodily traits seems more to suggest a certain sort of group mentality. In other words, it is restricted to female-bodied individuals that certain social differentiation also distinguished from other female-bodied persons. In intersectional vernacular, one homogeneous appearing category holds many groups, whose positions differ due to intersecting axes of difference, and the differences of grave goods among members understood to share similarities enough to warrant inclusion into the same category could be considered a result of this. Even within a binary system categories are multi-group units, and as such, items associated with some individuals should not be extended to the whole category. Though it must be carefully considered whether gender mutability through the life course and social position, where gender’s expression is altered due to intersecting factors, is at play,

ambiguous assemblages can of course be attributable to various things – nonbinary genders, for one.

5.2. Identifying nonbinary gender and fluidity in the archaeological record

The binary practice discussed in the previous section leaves little room for gender variety beyond the normative man/woman attribution: in terms of diversity, at best, the use of the sex/gender model results in persons who seem to identify with the “opposite sex”. However, even opposite sex identifying persons may end up being omitted. Though fortunately rarer in contemporary practice, this happens when sex determinations of skeletons are used to gender objects that are then used in a circular manner to sex skeletons, which lack the bony parts required in order to perform an osteological investigation (see Stratton 2016). As these are the familiar settings according to which mortuary contexts are and have been investigated, they lead to a total eradication of other kinds of gender variety: in other words, persons from the past who do not seem to conform to a fixed binary model. Holding on to said model is therefore ill-advised, especially as it tends to obscure the variety also *within* binary gender systems. This is crucially important, because if we agree with Oliver Harris and John Robb (2012, p. 671) who suggest that ‘ontological ideas about the body are never singular’, and apply this to gender, then multiplicity becomes relevant even with regards to seemingly binary gender systems. In other words, a society might fluctuate between a binary and a nonbinary ontology and thus be constitutive of different gender configurations at once, meaning that a binary system might, depending on certain circumstances, contexts and intersectional positions, allow different, even contradictory beliefs about gender to emerge. This enables binary understandings of gender to exist together with nonbinary ones. What this means is that fluidly switching between ontological outlooks results in a situation in which there are rarely only two gender categories.

Incidentally, when it comes to gender, it can be said that diversity beyond the binary, on top of the variety introduced by intra-sectionality, occurs in all gendered systems. A binary at-first-glance therefore presents no excuse not to expect diversity. But identifying nonbinary and fluid gender attributions in the archaeological record is no short order, even with intersectionality as the interpretative aid at our disposal, as these configurations differ. The wide range includes binary variance such as gender transforming behaviour in the form of gender shifts or gender liminality, but there exists also androgyny as well as nonbinary gender systems (see Stocklett 2005; Arwill-Nordbladh 2013). It is with regards to this that Enrique Moral (2016, pp. 798–

799) makes an excellent point in that it must be considered what is the point in which a certain role, action or inaction, ability or inability is attributable to variance from the hegemonic ideal and when it merits a category of its very own. In other words, it warrants investigation whether role reversal, gender negotiation or something short-term attributable to context is in question, rather than institutionalised nonbinary gender categories. Though gender archaeology's occasional advocacy towards the inclusion of multiple gender categories as a recourse against binarism is probably done with the best intentions, Moral (2016, p. 10) argues that third gender should not function as a universal go-to category, where anomalous individuals who do not seem to fit into a normal binary arrangement get consigned.

Despite these reservations concerning multiple genders, informed use of them is, however, not discouraged. For example, we know from ethnographic data that the California Chumash recognised the role of *aqi*, who as ritualists sang songs by the graveside and assumed gender roles and dress similar to that of women (Hollimon 2001a, p. 43). Though often male bodied, these *aqi* could also be post-menopausal female-bodied individuals. As also celibate individuals and persons predisposed towards homoerotic practices could mean identifying with this institutionalised gender category, the importance granted to reproductive ability and the inclination towards it is therefore paramount (Geller 2009b, p. 71). Thus, the category is characterised not by outward bodily difference, but by action and agency. A ritual role, which has an association with death excluded the participation of those with reproductive capabilities or inclinations (Hollimon 2001a, p. 47). Citing the known case of an institutionalised third gender, the Indian *hijra*, Geller (2008, p. 124) is right to point out the similarities, stating that here too reproductive action or inaction seems to contribute to some cultural understandings of gender. However, as this specific gender category also includes followers of the mother goddess and other ritual specialists, the situation becomes more complex. As varied and specific as they may be, how are multiple genders to be approached, or identified in the archaeological record? One possible way is through their vague, yet very institutional nature. Here is where we veer slightly from the fluidity endorsed by the intersectional anticategorical approach. Even though the fluidity of categories, the morphing of phenomena and the redefinition of borders conveys the complexity of real life more aptly, as suggested by Sylvia Walby, Jo Armstrong and Sofia Strid (2012, p. 231), long standing social practices can become institutionalised, which is where they also gain stability. Institutionalised multiple genders could therefore be expected to be somewhat more steadily present in the mortuary record, assuming also stability and consistency in terms of assemblages. A notion of stability in this context is therefore in order, because it

provides succour to the process of analysis. Furthermore, though we as archaeologists recognise that what we are investigating may be blurry, messy, instable, in flux and mutable, how we approach it through intersectionality can also act as a ‘stabilising factor’ (Walby, Armstrong & Strid 2012, p. 231). Marshall and Alberti (2014, p. 27) have also addressed the stability concerning some phenomena, stating that stability must be associated with repeatability. However, it should be said that no phenomena are ever truly stable. Rather, when change is gradual and slow, it translates to an illusion of stability that is nevertheless approachable archaeologically.

As demonstrated by the complexity adhering to gender multiplicity, such as *aqi* and *hijra*, it would be a challenge to detect such on archaeological evidence alone, which is why archaeological observation informed by the careful use of ethnographic data provides a credible starting point, as archaeologists Kelley Hays-Gilpin (2008, p. 253) and Sandra Hollimon (1996, pp. 205–206) suggest. Though Miranda Stocklett (2005, p. 569, p. 571) has voiced that it is best to keep a clear head and regard the ethnographies with a grain of salt when it comes to gender, as the representations might also portray biased views, there is no doubt that ethnography can be a real help. This is mainly due to the difficulty of conceptualising things for which our world provides no parallels, as ignorance about all the different gender attributions out there can put a real dampener on interpretation. Burial settings, like the world, are approached through discourse, our concepts, which is why it might not be a bad idea to enhance our imagination of what might be possible. As Gero (2015, pp. 10–11) states, what cannot even be comprehended is hardly entertained as a possible explanation. But with regards to analogies, it is important to bear in mind, that to utilise them is not to propose a direct link or equivalent, but rather, as Gero (2015, p. 7) suggests, to broaden our own interpretative horizons. A narrow view owing to the sex/gender model that ethnography can help broaden is, for example, the laden concept transvestite. This term has sometimes been used to describe burials where sexed individuals have been noted to have been buried wearing vestments and accoutrements interpreted to be associated with the “opposite sex” (see Cool 2002, pp. 29–30). It so happens, that certain specific configurations may make it so that what we are witnessing is not transvestism, especially when taking into account the term’s connotations with eroticism due to sexual taboo in our own cultural context, but liminality in terms of gender (Arnold 2002, p. 243). As stated by Arnold (2002, p. 250), the practice of donning the vestments of another gender can relate to ‘de-sexing’ in a religious context, therefore alluding to roles ritualists may have assumed. This goes to show that gender liminality might be relative to specific circumstances (Matić 2016, p.

820) – especially to ritual roles that were performed in a socially approved capacity (Hays-Gilpin 2008, p. 248). It has been suggested by numerous researchers that with regards to ritual specialists, such as shamans, gender norms do not seem to hold sway. Though it is conjectural whether people opt for such roles due to ambiguous gender identity or bodily androgyny due to some form of an intersex condition for example, it has been noted that ritual specialists do tend to lean towards ambiguity in terms of dress (Hays-Gilpin 2008, p. 247). To veer from gender norms reflects a status as a liminal being, who mediates between worlds and, in turn, genders. Though it is not always clear whether this sort of liminal androgyny merits its own category, or whether it is mostly attributable to a fluid binary gender system that allows for gender transformation (Monro 2005, p. 8), ambiguity, same as the situation with nonbinary genders, is a characteristic feature.

The matter of fluidity is important, offering a disruption of the gender binary without having to rely on multiple gender categories, given that gender as a continuum and a fluid concept is enough to accomplish this (Butler 2004, p. 43). So, let's devote some time to this business pertaining to ambiguity and fluidity. A shared observation among many archaeologists is that ambiguous burials are quite frequent. What this means, of course, is the banal observation that male graves contain female artefacts and vice versa. In other words, 'sex-specific' items are found in unexpected places, which creates all sorts of confusion (Jones 2011, pp. 187–188). Though this ambiguity is seen as quite the problem, how this ambiguity has been handled is also quite problematic. When operating in a fixed binary framework without intersectional awareness – or gender awareness for that matter – ambiguity is either ignored and termed anomalous, or it may lead to undue interpretations purporting the existence of transgender identity or additional genders (for critique see Geller 2016; Hollimon 2011). All of these strategies ignore the possibility that items interpreted female or male are no such items at all, and that some other axe of differentiation is at play. Ignoring the "problem" or attributing it to uncorroborated gender attributions seems unwise, especially as the cause of these numerous anomalous assemblages gets overlooked. What one means to stress here, is that an anomaly is not so much a problem as it is a *symptom*, because burials are at their most ambiguous when subjected to the fixity behind the binary model. As proposed by Matić (2012, p. 171), when faced with ambiguity, it might be prudent to question, whether what we are witnessing is in fact the material's inability to conform to a model that is unsuitable respective to the material under investigation. Importantly, the problem that anomalous ambiguous assemblages present goes away when fluidity is introduced, which is why fluidity in comparison to fixity is key to

understanding them. This is where ambiguity presents itself not as a methodological problem, but instead as a meaningful quality of archaeological data (Alberti 2006, p. 114, p. 116; see also Sørensen 2016). Taking all of this onboard, though the case of ambiguity is ambiguous enough to make it difficult to determine if our inability to understand a site, the choices made in terms of what is excluded and included, is due to our foreign position as outsiders looking in, it is quite important to recognise that ambiguity can be *intentional*. Thus, atypical finds and strange item combinations, which seem to veer from the norm in terms of what researchers expect male and female burials to exemplify, may not only allude to a fluid system but also to this sort of practice that intentionally seeks to create a mixed sense of gender, which recognises no fixed boundaries extending to the mortuary setting (Jones 2011, p. 203). What's more, the grouping together of certain items associated with social roles may affect their meaning, as suggested by Alexis Jordan (2016, p. 892), dispelling their individual gendering, as it were. Therefore, within a fluid system, different ambiguous findings merit no puzzlement, they are what is expected. A careful examination of said ambiguities, for example manifested through "anomalous" overlap in terms of items ethnographically associated with both men and women, can then be used to belie the fixity that often characterises a binary system. Overlap can then become key in revealing gender liminality and androgyny in a mortuary setting (Arnold 2002, p. 244, p. 252).

Overall, it seems that gender fluidity is a plausible explanation as to why the mortuary setting seems to showcase ambiguity to such a large degree, granting credence to the notion that gender fluidity in the past may have been more common than advertised. Nevertheless, anomalous findings have, at times, been attributed to gender transgression, which is believed to be punishable through ostracization – evident in the mortuary record as deviance from the norm (see Matić 2012). Another difficulty therefore arises pertaining to discerning whether anomalous findings are overlap due to socially accepted gender liminality, or ostracization meted out on account of transgressive behaviour. But if it is gender deviance we are witnessing, in the occurrence of a rigid gender binary structuring the society and acceptable codes of conduct, why would non-conformity be allowed to show in grave assemblages? This seems silly, even when taking into account that ideology can work to mask social reality, producing an illusion of a strict, fixed gender binary where there is none (Clayton 2011, p. 41; Pearson 1999, p. 4). Similar to how it seems fallacious to expect fluid systems to be structured according to a fixed binary in terms of their mortuary assemblage, fixed binary systems should not be expected to showcase variance. Ostracization, if practiced, could have been allocated through the treatment and disposal of remains in different places, through different means, leaving

virtually no traces in the archaeological record, in which case the mortuary setting would showcase no evidence of overlap. However, as divergent mortuary treatment may also have resulted from a wrong sort of death, which may have necessitated the deceased to be handled and disposed of in a manner that veered from standard practice, ritual archaeology and theory can help to discern the cause of different treatment (Weiss-Krejci 2011, p. 70; Jackes 2011, p. 115). Furthermore, as multiple genders and gender liminality seem often to be associated with ritual roles, gendered archaeology needs to gain allies in ritual archaeology as well, as all are needed to gain a holistic understanding about the society in question.

Regarding our case example of the Viking, if we assume that the items in the burial are associated with or belong to the individual interred, and were used by them, and furthermore, that all items relevant to the gender at hand survived (a big leap of faith), then gender liminality and androgyny can, perhaps, be ruled out based on the lack of overlap in terms of items. At least, Hedenstierna-Jonson et al. (2017, p. 858) state that conventional ‘female attributed’ items were not present. There are also no allusions to ritual roles, which could indicate gender liminality. However, that still leaves us with numerous possibilities, as this “atypical” assemblage is quite ambiguous, in its way. The gender system that produced such an assemblage could have been a binary one, where the Viking could have operated as a woman, or even as a man. We could also be looking at a fluid system with no fixed boundaries between genders, where genders could shift along a continuum, where the shifting in question could have been temporary or long lasting. What’s more, there is the possibility that a nonbinary system existed. Let’s look at all these different scenarios a bit more closely. If a fixed binary man/woman system prevailed, the female Viking warrior, though in possession of a different gender expression in comparison to some other women, would remain a woman, nonetheless. This could certainly be possible, as with regards to gender role negotiation in specific contexts, there are ethnographic data attesting that in some cases, women who adopt men’s roles do so without losing their status as women (Hollimon 2001b, p. 181). For the most part, women performing warrior roles have been identified in numerous different settings (see Linduff & Robinson 2008; Hanks 2008; Jordan 2009), even though at times these accounts fail to make clear whether these women were in fact operating as women. Iconography and literary sources can also help add veracity to claims towards this end, which has not been left unnoticed by our case study. Hedenstierna-Jonson et al. (2017, p. 858) offhandedly implicate 12th century Greenlandic and Icelandic sagas to back up their statements concerning weapon wielding women. The Norse-Icelandic sagas, in particular, portray many strong women who seem to be

able to adopt different roles, whether masculine or feminine, without losing credibility in a social setting (Lindeberg 1997, p. 101). However, instead of a fixed binary, this sort of behaviour can also be attributed to a fluid system where gender is conceived as unstable and able to traverse across a continuum, where individuals can shift their gender with relative ease. Carol Clover's (1993) argument in favour of a system such as this in early northern Europe based on these sagas, where a body's outward physiology did not automatically allot a specific gender position, is also fitting respective to the female Viking warrior case. It is also one that could explain this ambiguous find. In such a system, actions could override bodily composition and so although typical men are masculine as women are feminine, both can transfer these boundaries and move back and forth on a gender continuum, though the shift seems to carry negative consequences for men (Clover 1993, pp. 2–9). Furthermore, though mainly women were, perhaps, unusual, they were not conceived as being unnatural, and this is attested by laws where daughters took up roles as 'functional sons' in the absence of male heirs but could regain their womanhood upon marriage (Clover 1993, pp. 6–9; see also Gilchrist 1999, p. 58). In light of this, our female Viking's gender may have been similarly prone to shift and change, the martial role therefore constituting a relevant gendered phase and a preferred role in this individual's life. Though it cannot be said with any certainty, the absence of items or other signifying features most often associated with women in the larger Iron Age context also seems to speak against the individual's social position as a woman merely negotiating her position in a manly arena. Though adorning oneself with apparel considered masculine within a certain cultural context or donning the vestments of a warrior might be done for the purpose of communicating to oneself and others of masculinity, thus facilitating acting out the role of a man in a social capacity, another possibility that something else may be at work exists. Especially, as warriorhood is so clearly emphasised in the grave at the cost of other things.

As Harris and Robb (2012, p. 670) point out, it is important not to discount the transformative nature of items of bodily adornment and dress when it comes to bodily ontology. The role of items and clothing can therefore be thought of as manifesting gender, of bringing it into being, which is why it might not be enough to simply state that under that masculine warrior casing and all the assorted weaponry we have a "woman". Instead, the items might reveal something about the inner workings and mentality of this individual (Harris & Robb 2012, p. 670, p. 673). As such, nonbinary genders might also prove to be valid to the case. In fact, "atypical" burials with ambiguous gender attributions can also occur with institutionalised nonbinary genders and with regards to our case study it is interesting to note that during the Iron Age in Europe, it has been

suggested that some societies might have acknowledged more than two genders (Hollimon 2006, pp. 438–439). Cremations with weapons also prove interesting in this regard, because some cremated bones from weapon graves have been identified belonging to female bodied individuals. Although some researchers, (see for example Thrane 2013, p. 756) doubt these results, it may be that more females than we know might have been buried with weapons, alluding not only to the possibility of a specific group, but perhaps even an institutionalised nonbinary gender. Due to evidence from different Iron Age contexts pertaining to females taking part in conflicts, there is no reason to assume that warfare was the province of males only (Osgood 1998, p. 84). But in light of this, the relevant question is whether females could take up a gender normally reserved for male bodied individuals, or whether such behaviour warranted a wholly different gender (Gräslund 2001). As it is clearly possible for females to possess a self-identity that does not conform to a socially recognised identity for women, a possibility remains that this female could, as a result of adopting a manly role and the apparel to match, be counted among them with no need for a nonbinary, or even a fluid system. In an Iron Age context, Cecilie Brøns (2013, p. 66) also brings to the fore a prospect according to which women could change their identity to men by appropriating gender attributes such as weapons usually reserved only for men's use. This woman-to-man gender transformation could also result from engaging in violence and fighting in a mannish manner (Horn 2013, p. 239). However, without further traces, it is impossible to say whether the Viking was an individual, who in a relatively fixed binary setting as a “woman”, due to intra-secting variables, such as eliteness, was able to negotiate a different gender position, partaking in activities denied to some; or whether we are looking at a binary system, where she operated fully and full-term as “man”. Furthermore, it remains mere speculation but still possible, that a fluid system is behind the assemblage, where this Viking's gender has shifted, whether short or long-term. There is also the possibility that a nonbinary system was in effect, where role preference, ability or some other variable could have merited inclusion to another gender category entire. Ultimately, what comes to be determined, is whether the extended mortuary assemblage, the materiality of the body manifests any of this. What is needed is investigation into the traces gender may have left behind.

5.3. Traces relating to gendered practice and the ethics of speculation and exclusion

Molly Zuckerman (2017, p. 242) has lamented that intersections are hard to detect archaeologically, as they are multivalent and leave few traces in skeletal material. However,

archaeology's situation is not as dire as it may seem, because intersectional axes of difference all have material implications, not just skeletal ones. These include material forces that pertain to social differences and social positions such as age and class, and differences that relate to group affiliation that include being affiliated with a given occupation (Geller 2008, p. 129). When intersectionality operates from this place, seeking to identify shades of difference, variation and possibilities through the behaviour, activities and roles that have shaped physiology and affected bones and their morphology, matter is allowed to contribute. In addition, the body's materiality is brought closer to a continuum. As stated earlier, interpreting the intersecting axes by the phenomena they produce happens by discerning the number of different treatments and clusters of burial assemblages, and examining their distribution with regards to variables such as age and class. In other words, rather than seeking to sort people into categories, which are then used to categorise items, interesting groupings consisting of all sorts of archaeological materialities and bodies – be they human bodies, items or something else – should be the focus of investigation (Haughton 2018, p. 66, pp. 68–71). This is because they can be seen to constitute a group. The whole assemblage therefore merits an intersectional approach, furthermore as certain parts one expects to be present may not always be present. Though bones provide an excellent example of what may be missing, grave goods may also be lacking. With regards to the Viking warrior case, as discussed in the previous section, it is important to note, that not all grave goods may have survived, and perishable offerings are thus taken out of the equation, though they could significantly affect the interpretation.

Items are of particular concern when it comes to gender, but one important point of conjecture must also be brought up. Though it is easy to imagine that specifically the items which once belonged to the deceased and were used by them would find their place adjacent to the remains, James Whitley (2002, pp. 219–220) for one, critiques this common-sense conclusion. Thus, it should not be assumed that grave goods automatically reflect the personalities and individual life courses of the people interred (see for example Haughton 2018, p. 65). This, then, can be taken to mean that warrior graves do not straightforwardly translate to graves belonging to warriors, as Whitley too has proposed (2002, p. 219). This is significant, and relevant to the case at hand, because as discussed in chapter three, the material world and the objects we use to carry out repetitive tasks have a hand on shaping our bodies (Sofaer 2006, p. 80, p. 84). Skeletal modifications are exceedingly important in this regard, and when bones can be found in the mortuary setting, the information they can yield is overwhelming. There is certainly much to discover, as gender practices can venture into multiple life areas relating to diet, activities,

different risks taken, trauma undergone and so forth and all accessible through skeletal material. The traces due to the plasticity of the body under investigation are also valuable in that they may end up revealing variation that may be significant in terms of intra-sectional gender. In fact, it has been suggested that musculoskeletal stress markers, that have previously been used to reveal the presence of a binary division of labor between sexed individuals, might also be used to expose intra-categorical difference within a category, exploring different groups of people having different lifeways (see for example Stefanović & Porčić 2013). A tactic such as this would certainly make the analysis intersectionally relevant. The same could also be said of articular modifications, directional asymmetry, degenerative changes and so forth (Sofaer 2009, p. 160). By employing an intersectional framework, all bodies, even the osteologically undetermined ones, can be included in the analysis, which is a step towards inclusivity (Weismantel 2013, p. 232). Furthermore, as it has been suggested that musculoskeletal stress markers have the potential of being evident even in subadults, excluding them from the analysis on the basis of ongoing growth may be unwarranted (Halcrow & Tayles 2011, p. 343). However, there is a great deal of ambiguity relating to these markers, these traces of past actions. It requires delicate work untwining the tangle of knots and discerning gendered action from bones, but this is doubly true in instances where tasks are varied, or not long-lasting (Moral 2016, p. 803). The ambiguity pertaining to developmental changes the body has undergone also make it challenging to determine especially the cause of skeletal change – whether it be due to gendered practices or strain in general (Sofaer 2006, p. 114). As stated by Rachel Crellin (2018, p. 2), ‘the relational nature of the world and the animacy of matter means that causation is always complex and multiple’, which, by way of analogy, can be taken to mean that not all skeletal marks are attributable to any one thing. Though it is useful to imagine action and activity as a thing of crucial importance with regards to gender because it contains a potential for variability, actions are ambiguous and their material traces potentially even more so. This is why understanding of both cultural and biological processes, intersectionality, plasticity and epigenetics is needed in order to make sense of these changes.

Though gender as practice has great potential to be traceable, Sofaer (2006, p. 73) also advises to bear in mind that not all activities leave detectible marks in bones; an added complication arises from the level of change in bone tissue between individuals, which is far from uniform. Some individuals may be more susceptible to alteration than others, people being the complex beings that they are, responding differently, even with similar pathways of ontogeny, as Sofaer has pointed out (2006, p. 114). Furthermore, marks created can be relatively subtle, even absent.

Intersectionality holds that when plastic changes become more ambiguous, more can be at work, and that gender may no longer have been the driving social distinguisher, and possible non-segregation behind the lack of marks certainly merits investigation. However, though the absence of morphological differences may be telling, the subtlety of marks does not necessarily mean that gender did not matter, or somehow ceased to exist, only that current technology might not be able to detect its mattering. The ambiguities pertaining to the study of gender are such that it may be impossible, at present, to discern between certain kinds of gendered variant behaviour and moreover, whether such behaviour merits devising it as a practice carried out by a gendered group of its own, gendered separately from other gender groups (Epple 1998 as cited in Moral 2016, p. 798). Though some things may be beyond the limits of what information is recoverable at this junction, as stated by Gero (2007, p. 323), ‘ambiguity preserves options against such time when clarity may be better achieved’, and so time will tell how sophisticated novel techniques might help reveal nuances as of yet unavailable to us. Gero’s statement is relevant also because a mortuary sample is just that: a sample of a once living population of which many individuals may be absent in the archaeological record (Weiss-Krejci 2011; Jackes 2011). As such, we may not have access to all the things we would need to be able to form a cohesive, exhaustive account of past phenomena as no accessible “traces” may be left to us in the fragmented archaeological record.

As suggested by Sofaer (2006, p. 114), databases about known skeletal transformations and what has led to their development could be of significant help, contributing to the investigation of skeletal modifications that have gendered implications. Consideration towards the various forms that gendered activity can take is crucial, because when interpretations have turned to labor and activities and gendered divisions in particular, research has often ended up labouring under the assumption that strict divisions are universal with regards to roles (Hollimon 2011, p. 155; see also Geller 2016). As gendered divisions of labor seem to suffer most from outdated ideas, as posited by Geller (2009b, p. 67), sporting all the trimmings of duality, stereotypes and determinism, it is no wonder that additional evidence is thought to be needed in order to free female bodied individuals from the yoke of household and childcare duties to which they seem to be confined by design. A set of circumstances, which assigns male-bodied individuals a warrior status or a position of power based on weapons or rich burial assemblages, whereas female-bodied individuals need corroborating evidence to back up such claim is a prime example of what these stereotypes can lead to. But, though the Viking female case study should be commended on its critique concerning this double standard (Hedenstierna-Jonson et

al. 2017, pp. 857–858; see also Arnold 2016, pp. 834–835) it is guilty of the crime of yet another assumption; warrior status should, in all cases, be investigated beyond associated weaponry. In other words, the presence of weapons is not enough to infer a warrior's lifestyle. Though the case study expresses that pathological injuries were checked for, but were not observed in the skeletal material (Hedenstierna-Jonson et al. 2017, p. 855), the authors fail to make clear, whether the material was examined for plastic changes caused by repetitive action attributable to training or fighting – traces that could more readily corroborate martial activity in an active capacity. Especially so, as the beginning of the article presents allusions to 'fierce' female warriors (Hedenstierna-Jonson et al. 2017, p. 853), which certainly seems to infer active physicality.

The mortuary assemblage through an intersectional lens may prove a tough nut to crack, juggling all those ugly variables, but after traces have been identified, one way to manage the complexity is by computational methods that help to reveal significant patterns and groups. The multivariate analysis clusters burials based on the assemblage, which is why the results could be used to gain understanding about intersecting social identities, and multi-group variation. As Susan Stratton (2016) has pointed out, multivariate statistical techniques such as correspondence analyses might help reveal the complexity present within a single site that go beyond the male/female type division that seem to overshadow most analyses. It is here that sex determinations could also be utilised alongside the intersectional approach. The genetics derived determination of the female Viking warrior could be used to check for the relevance of a fixed binary system or showcase its poor fit in relation to the material at hand. Through juxtaposition, such a strategy could utilise sex to reveal the fluidity, variability and multiplicity concerning gender, and when used in this manner DNA can be a force for good. As reminded by Christina Fredengren (2013, p. 62), the identification of chromosomes through DNA analyses must be understood to reveal potentiality. Chromosomes, then, and their potentiality must be understood as an open process both in terms of the body's morphology and gendered expression. However, this is something that the study does not do, but takes the sex/gender system as a given, even if it ends up criticising stereotypical accounts of gender roles.

Furthermore, as stressed previously, matter is not static, and its variability could be expected to translate to gendered lifeways. This is why DNA as well as osteological methods should also seek to look for variability. Our case study, as seemingly all heavily biology-oriented studies, operates within a fixed binary framework that recognises no other functional classes besides

XX and XY, therefore also excluding variety in terms of other phenotypes, which might be of note. As matter and meaning affect each other, intersex conditions and other bodily variety might be relevant, especially when taking into consideration the ease with which persons in possession of bodies that veer from the statistical normal seem to be able to adopt different genders and roles. The genre-pluralist theory proposed by Surya Monro (2005, pp. 16–17, p. 19) maintains that physiological and morphological differences between groups of people may and do also extend into their social lives, though this relationship is in no way deterministic. In order to illustrate this sort of a potential connection, morphological androgyny in terms of graceful and slender skeletal structure identified in male bodied individuals from bronze age burial cairns from Sweden has been associated with ritualists (Thedéen 2003), which shares a connection with gender liminality, as discussed in the previous section. A possible intersex condition as a cause towards explaining gender ambiguity and fluidity relevant to the Viking female warrior case, is however something that remains unaddressed by the authors.

Multivariate methods in addition to studying gender on a smaller scale is also supported by Erica Hill (1998, p. 118). Though small scale studies are statistically challenged, meaning that more often than not they lack the volume that is required to draw statistically significant results, small-scale local level studies in terms of certain geographical locations, domestic groups and social houses, benefit the study of gender by revealing nuances (Clayton 2011, pp. 45–46). These shades of difference are well-suited to be compared against one another, whereas large-scale society wide investigations mask and homogenise the variety that is apparent when the focus is turned towards the smaller residential groups (Clayton 2011, pp. 45–46). With regards to this, it is important to note that ideas about gender may lack both stability and uniformity, in that even within a relatively small geographical area, gender multiplicity and gender binary may have existed together. Furthermore, as Mark Haughton argues (2018, p. 67), moving away from small scale datasets also erases variation through time resulting in homogenisation of the data making it seem as though, in terms of gender, all prehistoric societies, and ones not so prehistoric as it turns out, portray a similar gender structure. This has the taint of universalism all over it. But though intersectional approaches are best suited to investigations of small-scale sites, such as single cemeteries (Arnold 2016, p. 836; Haughton 2018), they require reference data to draw comparisons from. Regarding this, the female Viking warrior case, that examines in depth only one individual, lacks the larger context of a full site, cemetery or a local geographical area that is required if one means to make allusions towards the variety of gender systems. Though the authors reference the 1100 excavated burials in the Birka town region

(Hedenstierna-Jonson et al. 2017, p. 854), making it known that reference data exists, probably even on a smaller scale, the authors do not situate the assemblage within any wider context. It is therefore difficult to conclude how atypical this sort of assemblage is.

There is much to be gleaned from the mortuary setting using a Baradian intersectional approach, but where the benefits lie, also challenges lie in wait. The complexities and ambiguities related to intra-sectionality are such that it may not be possible to factor in all the different variables, because of the things that remain unknown and not understood, as Gero states (2007, pp. 315–316). As Sarah Clayton (2011, p. 35) also points out, without insider information the meaning behind much of the mortuary treatment is speculation, making the parsing of the mortuary setting a wholly speculative endeavour. It is speculation that also brings us back to the topic of ethics. Though feminists would be the first to claim that assumptions as such can be far from ethical, speculation in archaeology can be, if one keeps a hold of one's certainties and uncertainties. The memorable words of Della Collins Cook (1981, p. 134), who, referring to the mortuary sample, stated that the one thing we know for certain is that the people are dead, have a certain ring to them. This is where we as archaeologist must contend ourselves as ones embracing ambiguity. This is also how we do right by archaeology, for it is Gero (2015, p. 12), who states that while asserting the factuality of research findings and presenting them as certain, an inherent characteristic of archaeology is denied. Gero, instead, seeks to bring ambiguity to the fold of archaeological practice, not dismissing or just accepting, but instead embracing it as a necessary part.

A similar point of view is also held by Tim Flohr Sørensen (2016, p. 742), who argues against a dismissal of speculative uncertainties brought on by ambiguity. In line with Gero, he sees the speculative state not as an epistemological issue that merits elimination, but instead one that necessitates engagement. However, building on Gero, Sørensen (2016, p. 745, pp. 747–748) proposes that, in addition to ambiguity, archaeologists must also contend with 'the vague'. He thus argues that even if archaeologists were in possession of all the data in the world, achieving clarity might still not be possible, due to the vagueness some phenomena exhibit (Sørensen 2016, p. 746). This vagueness especially seems to characterise social phenomena, as broached in chapter four. While to Sørensen ambiguity refers to phenomena that can be defined, though in more than one way, vagueness can be understood to mean ontological fuzziness, which is why vague phenomena seem to elude attempts to devise 'decisive' and concluding statements about them (Sørensen 2016, p. 748). As these particular phenomena remain out of our reach,

denying attempts to describe them 'adequately', defying easy categorisation (Sørensen 2016, p. 748), they must remain open, being characterised more by potentiality. They are thus more easily reached through speculation. So, when it comes to the mortuary setting, while ambiguities are certainly abundant in the material, the introduction of gender into the mix results in a situation where, in addition to ambiguity, we are also dealing with a great deal of vagueness. This is why it is so challenging to determine where for example binary gender and gender negotiation, liminality and androgyny end and where they become nonbinary gender multiplicity instead.

Though when it comes to the mortuary setting, perhaps not all beyond the point of asserting death is speculation, but still it stands that knowledge claims should be made with careful consideration for the meaningful ambiguity and vagueness. Especially, because the category gender, from the point of view of fuzzy boundaries, multiple ontologies, fluidity, mutability and change is where clarity absconds us to be replaced with speculation instead. This, however, is not a concept that is often entertained or a strategy that ends up being pursued. Gero (2015, p. 6) and Sørensen (2016, p. 744) have both observed, that there seems to be a need to gain facts and attain closure with regards to interpretations, even though the abounding ambiguous evidence in no way supports such clear-cut delineations. This is also why tentative data may end up being 'pushed', meaning it is made to appear more certain (Gero 2015, p. 15). The female Viking warrior case study also stumbles somewhat into the very real pitfall cautioned against by Gero (2015, p. 15) where, in the hopes of showcasing gender role variance, data is made to seem more certain than it is. This happens by stating that 'the individual in grave Bj 581 is the first confirmed female high-ranking Viking warrior' (Hedenstierna-Jonson et al. 2017, p. 857), even though warrior status as such, including a possible role as a battle tactician, remains to be confirmed by something else besides the presence of items. So, even though speculation is recommended, speculative accounts and ambiguities still present in the data should be made known.

Though done, perhaps, with good intentions, this sort of pushing is advised against. To Gero (2007, p. 313), archaeology must first and foremost be an interrogatory process, the *raison d'être* of which is to ask questions. Through new questions, new understandings are achieved, which can be revolutionary in that it can change much of what we thought we knew. But as future is also speculative in and of itself, possibly introducing novel insights and clarity as per Gero's (2007, p. 323) earlier comment, it follows then, that if archaeology and its interpretations

endeavour to be relevant and meaningful in the future, speculative approaches go a long way in realising this objective. But even as the future is unknown, so are the different universes of all the pasts and the presents (Ståhl, Tham & Holtorf 2017, p. 240, p. 244). In other words, if we recognise the differences and the uncertainties that different futures may hold, it becomes apt to also consider the pasts in an equal light, holding as many uncertainties and possibilities as the futures yet unknown to us. So, far from being confined to futuristic imaginings, speculation benefits the study of pasts as well, which may be just as unexpected as the future, with the potential to be vastly different from our own. Seeking to imagine these pasts from a perspective brought on by speculation provides opportunities for different knowledges to matter, to be brought into being. The point I wish to stress here is that gender, characterised by much of the vagueness described by Sørensen and the ambiguities discussed by Gero, benefits greatly from being interpreted through a speculative lens. As Gero (2015, p. 12; see also Sørensen 2016, p. 750) states, it should not be the role of archaeology to close the case by finalising one ‘correct’ account of the past, but rather to keep revisiting it, thereby bringing about an account of the past, in which there is no one real past. In this regard, the past remains open. As such, interpretations that touch on gender do not seek to “close the case” but understand gender as an open-ended process, a becoming, with no beginning or an end, but one that continues to unfold. As what is real comes to be challenged and reconceptualised by multiple accounts rather than one single version of the truth, the course of the past can be characterised by plurality instead of singularity. This sort of view is very much in line with Barad (2007, p. x) when she voices that the past is not finished.

The ethicality brought on by speculation therefore involves the enabling of possibilities for other ways of knowing and being, but also being cognisant of the apparatuses one is a part of, the exclusions they enact, and the limits that they bring. As speculation can also function as an ethical force that helps to rethink difference in the present (Ståhl, Tham & Holtorf 2017, p. 244), it may also keep the door open to engagement with marginal groups (Pinto & Pinto 2013, p. 178) – marginality that may arise through gender role negotiation and unorthodoxy. This is also how the female Viking warrior case, which had been more or less closed using a biased stereotypical stance, is ethical in its showcasing of gender role diversity and open-mindedness when it comes to revisiting cases. However, though this is certainly commendable, the case falls short on the account of disregarding potential gender diversity and intersectional multiplicity. Contradictorily, even as the authors caution against universal presentist notions concerning gender stereotypes, they also state that finds of this nature present ‘exceptions to

the norm' (Hedenstierna-Jonson et al. 2017, p. 853). The authors therefore maintain a fixed binary framework of presentist stereotypical normativity according to which females with weapons must be understood as an anomalous exception that confirms the rule. This is where the study thus seems to contradict itself, on one hand calling for gender role diversity, while on the other hand maintaining the anomalous occurrence of such a diversity.

By failing to take into account different social positions attributable to female-bodied individuals as well as disregarding the specificity of groups and the intersectional mutability that can affect gender role negotiation, the study ends up excluding these possibilities. At the same time, it downplays the particular circumstances that might produce different gender identities. Furthermore, by also upholding a fixed binary framework, variety in terms of gender fluidity and a nonbinary system is ignored, in addition to excluding phenotypical morphology. Unsurprisingly, the study also fails to account for these exclusions that are produced in its course. Ultimately, what the firmly held female-woman determinism shows is a limited imagination when it comes to the nature of things and according to which things can be defined. Such thought processes, as Christopher Witmore (2014, p. 241) has stated, have a way of backfiring, in effect confining things into exclusive 'positions of potentiality'. This can be taken to mean that when one potentiality is fixated on, blinders inexorably come to be donned resulting in the exclusion of other potentialities. They are thus denied the equal opportunity of being brought into being. In this regard, Butler's statement at the very start of this thesis about imagining possibilities could be construed as an endorsement towards speculation, which not only steers clear of exclusion, but allows for different potentials to exits, thereby granting opportunities to all that may be possible. Assuming such a stance then can only mean that a more inclusive archaeology emerges, one that is well aligned with gendered and queer approaches, which have often stressed the importance of inclusivity and the demerits of exclusion regarding interpretations. The openness called for by speculation can thus be understood as an ethical means through which to manage the exclusionary nature of apparatuses. Such an approach would also benefit the discussed case of the Viking warrior.

All in all, the female Viking warrior example is a case in point towards seemingly ethical archaeological practice that, as we go deeper, is revealed to perpetuate the tradition of the fixed sex binary and sex/gender model determinism. If we recall what Barad said about sticks and rooms, sex as an agency of observation saturated with the concept of the biomedical bodyscape is used as the stick that makes this particular Viking intelligible. What's more, due to the

adoption of such an exclusionary apparatus, even with the full belief that what is being investigated is sex, the situation is quite different: indeed, sex in all of its queer diversity is *not* under investigation. When the apparatus is not accounted for, the binary division that is continuously produced and reproduced, remains unproblematised as do the exclusions it effects. What remains to be said, is that rather than committing to a fixed binary, to an either-or regime, a more open approach is one that engenders potentiality for a more diverse past.

6 Conclusion

The chosen title of this thesis, *Gender Matters*, carries two points in addition to it referring to matters concerning gender: firstly, that *gender* matters – it is important. Secondly, that *matter*, and the materiality of gender is what matters – it is significant. With regards to the first point, despite theoretical writings stressing the importance of context, fluidity and diversity, the binary division of anatomical males and females that equates to cultural men and women continues to set the premise for investigations into gender. Implicit in this is the deterministic understanding that gender must correspond with sex, reducing the past to being only as diverse as our modern dimorphic scientific understanding gives it cause to be. The impetus for this thesis originated from this, from the frustration experienced when reading osteological papers committed to the sex binary, which also conflate sex and gender in a confusing mess, treating the two as synonyms, their integrity brushed aside. A second, but no less significant experience of frustration was caused by studying biological archaeological methods. For it was here that it was made clear that only when the mortuary setting seems to suggest something besides the deterministic sex/gender attribution, when this evidence to the contrary becomes undeniable through, for example, items assigned as female based on their association with female skeletons appearing adjacent to male skeletons, only then does gender really matter. This I found very problematic – why should gender only matter then, with gendered approaches being employed only at this point and not from the start? This distanced yet at the same time synonymous tactic when it comes to gender and sex is one that confounds exceedingly. Why do we privilege one difference and assume it is the one most relevant, at the cost of others? Why does a fixed sex binary still inform understanding about gender, which has for long in social studies been thought of as multiple and diverse and intersectional?

A closer look into these questions revealed that due to a legacy of division between nature and culture, extending beyond epistemology to ontology, it has been logical to separate gender from sex, one being of the mind and the realm of culture, the other of the body and belonging to nature, resulting in the sex/gender model. Due to this separation, sex and gender have been approached from very different places, explored with different methodology and conceptualised differently. Though left behind in feminist discourse and thus obsolete in the place of its origin, it suffices to say without simplifying with too heavy a hand, that the inchoate sex/gender model, or rather the “two-sex/two-gender” model, is very much alive in the sciences. Factoring in the reluctance to adopt otherwise non-traditional views in addition to eschewing engaging with

feminist discourse, it is no wonder that ideas supporting diversity are hard pressed to find a footing in biological avenues. As scientific archaeologies are often deemed the more objective and even understood to provide better, more informed and factual knowledge about the past, as osteo- and bioarchaeological insight is routinely used wherever mortuary remains are discovered, these biological understandings about the body have also saturated archaeology as a whole. In comparison, gendered archaeologies reside mostly in the margins, where also plurality and fluidity with regards to gender remain firmly settled. This is why, despite the nearly four decades since its conception, the sex/gender model has obstinately stood its ground. In archaeology it most pervasively continues to guide interpretations of the mortuary setting, extending into treatment, divisions of labor, roles, activities and artefacts according to dimorphic sexual difference with the reductive assumption that from sex follows gender. To this end, even as archaeology is willing, if not eager to deal with gender, the insistence with the sex/gender model, the “allowance” of gender into the fold of analysis, in actuality, paradoxically, becomes a cop out. In other words, it grants an apparent commitment to culture as a valid variable in structuring humanity, all the while gender is collapsed into sex, leading to essentialist views continuing to guide analysis and the process of interpretation.

How, then, to go about challenging this problematic sex/gender model? It was deemed that the most apt way to do this would be to prove the plural nature of both sex and gender, that would become accessible as long as these two things thought separated by foundational differences, were approached from a standpoint of unity. In the hopes that one might envision a concept of sex and gender together, which could traverse the field, extending from gendered approaches to biological ones, from marginal to mainstream and from theory to practice, it was deemed necessary to delve into theories of new materialisms for an answer. Through new materialisms, which have sought to reject divisions and dichotomies of any kind, the division between nature and culture, between body and mind, between matter and meaning and even between sex and gender would be rendered futile. Thus armed, I set out to discover if one could reform the archaeological concept of sex and gender and break free from the mould of determinism and binary? Furthermore, could this freedom be achieved while still including matter, thus avoiding the trap of many gendered approaches, making the approach valid, accessible and approachable archaeologically? The answer to these questions and the one asked at the start of this thesis, whether it is possible to access both sex and gender in a nonbinary way, is yes – to a degree. The success to-a-point comes from the understanding gained through the course of this thesis that classifying archaeological samples into two categories is not inherently bad, sex

determinations are not “evil” per se. So, even though it is possible to access both sex and gender in a nonbinary fashion, it is not absolutely necessary to do so. Both the sciences and humanities, even on their own are able to conduct valid research and produce valid results. According to the tenets of pluralism, one way of knowing is not inherently better, so neither must hold a privileged position over the other, as one that is able to produce somehow better archaeological knowledge. Bringing to mind Harris and Robb’s views concerning the ontological fluidity that might exist in any given society, assuming a fluid stance when it comes to bodies and gender systems means that there is no need to opt between binary and nonbinary and question ‘which one is “really” true’ (Harris & Robb 2012, p. 676). An open-ended philosophy that praises speculation, vagueness and multiplicity when it comes to knowledges and possibilities, therefore also requires the adoption of such a stance, whereby understandings about the body can be both binary and multiple. Hence, the body can justifiably be analysed from a scientific bioarchaeological standpoint as well as using a speculative intra-categorical materialcultural approach that promotes plurality. In light of this revelation the relevancy of Sofaer’s prior objection against the notion of relinquishing the male/female binarism holds some merit.

However, though the usefulness of such an analytical enquiry can hardly be gainsaid, it is equally valid to point out the necessity of questioning for what exactly is sex determination useful? It can certainly tell us all sorts of things, but there are also all sorts of things that sex determination, as it is understood and done now, is ill equipped to inform us. What is most central to the lone concept of sex is the understanding that by determining sex, we are producing the binary – it does not exist boundaries-intact and packed, ready for us to discover. As archaeological knowledge, as any knowledge, is dependent upon the method of its production, the *modi operandi* of archaeological practice are intimately involved in the research findings. It is important to recognise the salience of this. Therefore, archaeological forays into past lives should never assume sex determination to inform on gender, as gender will not be reducible to sex. Merely determining sex can never be enough, gender always warrants consideration, not only when things seem suspiciously “anomalous”. Even though it is good practice to employ all methods at our disposal that provide information, and sex determination, along this train of thought, is not discouraged as such, the problem lies in what sex is assumed to mean, what is implicit. What becomes to be discouraged are only the taken-for-granted assumptions that accompany it. Therefore, if performed, the nature of sex determination as a phenomenon should be understood. An open-ended approach proposed in this thesis, which eschews a preassigned binary and seeks to investigate gendered configurations in whatever form they may take, cannot

be fashioned solely from sex despite matter's proclivity to entertain multiple interpretations. Nor can it be formed solely based on gender because gender is understood to exist separate from matter. A reconfiguration is in order and these two entities thought to be incommensurable can come together. Sexgender therefore provides the path one must tread on the road towards diversity, which becomes approachable through a reconceptualised concept of gender as a material expression. Here we arrive to the second point of this thesis – the significance of matter with regards to gender. In this novel regime, the phenomenon that is gender emerges and becomes determinable at the intersection, and due to the inseparability of matter and meaning, it is also constitutive of bodily materiality and morphology, in other words – sex.

By questioning the taken-for-granted frameworks implicit in different analyses, and highlighting mutability, change, fluidity and plurality, an intersectional Baradian approach can help to demonstrate how archaeology reproduces conventions that are normative and exclusionary. It can also show how narrowing on categories such as sex can end up naturalising and essentialising identities. Though the mortuary setting is quite the messy tangle to end up with, its reconstruction necessitating resourceful use of all the tools and traces we have at our disposal, and, even to this end, definite answers may elude investigation, through such a lens, the materiality of the mortuary assemblage can reveal significant patterns and groups. For it is through the materiality of these assemblages, where items come to play with gendered bodies, that gender manifests its diversity and difference in an archaeologically accessible way, providing a more in-depth account of lives in the past. The notion of gender as a stable, homogenous category founded primarily upon preassigned bimodal biological difference, is not suitable, as it does not truly allow for variety or extend beyond the binary, even when the archaeological material gives it cause to. If we look at the case of the female Viking warrior, for example, we come to understand that though it is definitely a step up in the direction towards diversity and broadening of horizons in respect to veering from stereotypes, there are still some clear problems. For one, it still functions within the established parameters of a traditional bioarchaeological study. In other words, sex ends up fully defining gender, and though they are deemed separate, the difference between these two concepts is redundant, showing only in theory but dissipating in practice. In actuality, then, sex and gender are reduced by the bounds of determinism to mere synonyms. And while social roles and practices seem less restricted in terms of who may perform them, a fixed gender binary is maintained even though, as it turns out, it is only one possibility among many. The relevance is also never questioned, which contributes little in the way of adding to our understanding about gender in the past, the

sex/gender model being, in effect, but a reflection of our own gender system. The crux of the matter, as stated by Megan Jones, is as follows:

[R]ather than enquiring as to whether society was organised in accordance with a (...) binary gender system, scholars have, in a manner of speaking, placed the cart before the horse, querying the data from a perspective which presupposes the existence of such an arrangement. (2011, p. 220)

That these sources of critique find themselves manifested time and time again is not surprising, as dualism is common sense, pluralism is not – it needs effort. As was suggested by Wylie (2007, p. 210, p. 213), archaeology needs a conception of gender without the essentialism that hitherto has been essential, if a tacit part of analysis – a conscious decision on the part of the analyst or no. Baradian materialcultural sexgender as a phenomenon, a process and a becoming, whose relational onto-epistemology is capable of supporting both binary and multiple understandings of the body and gender, provides a viable alternative to the sex/gender model. If one deigns to use a metaphor, we could imagine the Viking's XX chromosomes as the steppingstone which begins the becoming, showing potentiality in terms of what may become. Sex then constitutes an entangled twine in a grander tapestry where sexgender exists inseparable and convoluted, emerging together with other phenomena forming all the fascinating colours and shapes, awaiting investigation where gendered pasts are at once both binary and multiple, fluid and diverse. Sexgender also includes practicality, which is valuable for archaeology: sex and gender despite their entanglement, when determined are allowed to exist separately. This way sex can continue to be utilised as a term to convey bodily difference, even as sex and gender are approached as a unit, as sexgender, omitting the determinism that is implicit in the sex/gender model. With regards to this, it is important to bear in mind that sex as it is produced by the biomedical bodycape can be used to analyse, but not to interpret. As the determinism in the wake of the sex/gender model is left behind, the determination of sex leaves us with a tale untold, clearing a path for gender to tell the story. As the materiality of the body comes to be conceived of both matter and meaning, and nature as well as culture, 'the bare bones of sex' (Fausto-Sterling 2005) have more to offer than bare sex. By denaturalising nature and showing the materiality in culture and revealing their dynamic co-constitution and dependency to the shared environments of their creation, gender encompasses sexgender's potentiality, allowing diversity beyond the binary to shine through. Thus, the problems associated with the sex/gender model can be laid to rest. What is revealed shows that the only universal thing about sexgender seems to be its diversity.

Bibliography

- Agarwal, S. C. & Beauchesne, P. 2011. It is not carved in bone: development and plasticity of the aged skeleton, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 312–332. John Wiley & Sons, Chichester.
- Agarwal, S. C. & Glencross, B. A. 2011. Building a social bioarchaeology, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 1–11. John Wiley & Sons, Chichester.
- Agarwal, S. C. 2012. The past of sex, gender, and health: bioarchaeology of the aging skeleton, *American anthropologist*, vol. 114, no. 2, pp. 322–335.
- Alaimo, S. 2008. Trans-corporeal feminisms and the ethical space of nature, in S. Alaimo (ed.), *Material feminisms*, pp. 237–264. Indiana University Press.
- Alaimo, S. & Hekman, S. 2008. Introduction: emerging models of materiality in feminist theory, in S. Alaimo (ed.), *Material feminisms*, pp. 1–19. Indiana University Press.
- Alberti, B. & Danielsson I. B. 2014. Gender, feminist, and queer archaeologies: USA Perspective, in C. Smith (ed.) *Encyclopedia of global archaeology*, pp. 2988–2997. Springer, New York.
- Alberti, B. 2006. Bodies in prehistory: beyond the sex/gender split, in P. P. Funari, A. Zarankin & E. Stovel (eds.), *Global archaeological theory: contextual voices and contemporary thoughts*, pp. 107–120. Kluwer academic/Plenum Publishers, New York.
- Alberti, B. 2016. Archaeology and ontologies of scale: the case of miniaturization in first millennium Northwest Argentina, in B. Alberti, A.M. Jones & J. Pollard (eds.), *Archaeology after interpretation: returning materials to archaeological theory*, pp. 43–58. Routledge, Walnut Creek, California.
- Anthias, F. 2012. Hierarchies of social location, class and intersectionality: towards a translocational frame, *International sociology*, vol. 28, no. 1, pp. 121–138.
- Armstrong, G. J. 1998. Introduction: sex, gender and health status in prehistoric and contemporary populations, in A. L. Grauer & P. Stuart-Macadam (eds.), *Sex and gender in paleopathological perspective*, pp. 1–10. Cambridge University Press.
- Arnold, B. 2002. “Sein und werden”: gender as process in mortuary ritual, in S. M. Nelson, & M. Rosen-Ayalon, (eds.), *In pursuit of gender: worldwide archaeological approaches*, pp. 239–256. Altamira Press, Rowman.
- Arnold, B. 2016. Belts vs. blades: the binary bind in Iron Age mortuary contexts in Southwest Germany, *Journal of archaeological method and theory*, vol. 23, no. 3, pp. 832–853.
- Arwill–Nordbladh, E. 2013. Negotiating normativities– ‘Odin from Lejre ’as challenger of hegemonic orders. *Danish journal of archaeology*, vol. 2, no. 1, pp. 87–93.
- Barad, K. 2007. *Meeting the universe halfway: quantum physics and the entanglement of matter and meaning*. Duke University Press, Durham (NC).
- Brady, A. & Schirato, T. 2011. *Understanding Judith Butler*. Sage Publications Ltd.
- Brøns, C. 2013. Manners make the man. Challenging a persistent stereotype in the study of Italian Iron Age graves, *Analecta Romana instituti danici XXXVIII*, pp. 53–77.
- Brown, K. A. 1998. Gender and Sex – What can ancient DNA tell us? *Ancient biomolecules*, vol. 2, no. 1, pp. 3 – 17.

- Brumfiel, E. M. 2006. Methods in feminist and gender archaeology: a feeling for difference – and likeness, in S. M. Nelson (ed.), *Handbook of gender in archaeology*, pp. 31–58. Altamira Press, Walnut Creek.
- Bruzek, J. & Murail, P. 2006. Methodology and reliability of sex determination from the skeleton. *Forensic anthropology and medicine*, pp. 225–242. Humana Press.
- Brück, J. 1999. Ritual and rationality: some problems of interpretation in European archaeology. *European journal of archaeology* vol. 2, no. 3, pp. 313–344.
- Brück, J. 2009. Women, death and social change in the British Bronze Age. *Norwegian archaeological review*, vol. 42, no. 1, pp. 1–23.
- Budja, M. 2010. The archaeology of death: from ‘social personae’ to ‘relational personhood’. *Documenta praehistorica* XXXVII, pp. 43–54.
- Butler, J. 1988. Performative acts and gender constitution: an essay in phenomenology and feminist theory. *Theatre journal*, vol. 40, no. 4, pp. 519–531.
- Butler, J. 1990. *Gender trouble: feminism and the subversion of identity*. Routledge, New York.
- Butler, J. 1993. *Bodies that matter: on the discursive limits of “sex”*. Routledge, New York.
- Butler, J. 2004. *Undoing gender*. Routledge, New York.
- Butler, J. 2011. Speaking up, talking back. Joan Scott’s critical feminism, in J. Butler & E. Weed (eds.), *The question of gender. Joan W. Scott’s critical feminism*, pp. 11–28. Indiana University Press.
- Chovalopoulou, M. E., Bertsatos, A., & Manolis, S. K. 2017. Landmark based sex discrimination on the crania of archaeological greek populations. A comparative study based on the cranial sexual dimorphism of a modern greek population. *Mediterranean archaeology & archaeometry*, vol. 17, no. 1, pp. 37–46.
- Clayton, S. C. 2011. Gender and mortuary ritual at ancient Teotihuacan, Mexico: a study of intrasocietal diversity. *Cambridge archaeological journal*, vol. 21, no.1, pp. 31–52.
- Clover, C. 1993. Regardless of sex: men, women, and power in early Northern Europe. *Representations*, vol. 44, pp. 1–28.
- Cool, H.E.M. 2002. An overview of the small finds from Catterick, in P.R. Wilson (ed.), *Cataractonium: Roman Catterick and its hinterland. Excavations and research, 1958–1997*, vol. 2, pp. 24–43. Council for British Archaeology, York.
- Cook, D.C. 1981. Mortality, age–structure and status in the interpretation of stress indicators in prehistoric skeletons: a dental example from the Lower Illinois Valley, in B. Chapman, I. Kinnes & K. Randsborg (eds.), *The archaeology of death*, pp. 133–144. Cambridge University Press.
- Conkey, M. W. & Spector J. D. 1984. Archaeology and the study of gender. *Advances in archaeological method and theory*, vol. 7, 1–38.
- Conkey, M. W. & Gero, J. M. 1997. Programme to practice: gender and feminism in archaeology. *Annual review of anthropology*, vol. 26, no. 1, pp. 411–437.
- Connell, R.W. 1996. New directions in gender theory, masculinity research, and gender politics. *Ethnos*, vol. 61, no. 3–4, pp. 157–176.
- Crellin, R. J. 2018. New Materialisms, in S. L. L. Varela (ed.), *The Encyclopedia of archaeological sciences*, pp. 1–4. John Wiley & Sons, Inc.
- Dommasnes, L. H. 2014. Gender, feminist, and queer archaeologies: European perspective, in C. Smith (ed), *Encyclopedia of global archaeology*, pp. 2968–2980. Springer, New York.
- Dommasnes, L. H. & Montón-Subías, S. 2012. European gender archaeologies in historical perspective. *European journal of archaeology* vol. 15 no. 3, pp. 367–391.

- Dowson, T. A. 2000. Why queer archaeology? An introduction. *World archaeology*, vol. 32, no. 2, pp. 161–165.
- Egeland, C. & Gressgård, R. 2007. The “will to empower”: managing the complexity of the others. *NORA – Nordic journal of feminist and gender research*, vol. 15, no. 4, pp. 207–219.
- Fahlander, F. & Oestigaard, T. 2004. *Material culture and other things: post-disciplinary studies in the 21st century*. Elanders Gotab, Vällingby.
- Fausto-Sterling, A. 1992. *Myths of gender: biological theories about women and men*. Basic Books, New York.
- Fausto-Sterling, A. 1993. The five sexes: why male and female are not enough. *The Sciences* vol. 33 pp. 20–24.
- Fausto-Sterling, A. 2000. *Sexing the body. Gender politics and the construction of sexuality*. Basic Books, New York.
- Fausto-Sterling, A. 2005. The bare bones of sex: part 1 – sex and gender. *Signs: journal of women in culture and society*, vol. 30, no. 2, pp. 1491–1527.
- Fausto-Sterling, A. 2013. *Sex/gender. Biology in a social world*. Routledge, New York.
- Findlay, D. 1995. Discovering sex: medical science, feminism and intersexuality. *CRSA/RCSA*, vol. 32, no. 1, pp. 25–51.
- Fossheim, H. J. 2017. Science, scientism, and the ethics of archaeology. *Norwegian archaeological review*, vol. 50, no. 2, pp. 116–119.
- Fotopoulou, A. 2012. Intersectionality queer studies and hybridity: methodological frameworks for social research. *Journal of international women's studies*, vol. 13, no. 2, pp. 19–32.
- Franklin, M. 2001. A Black feminist-inspired archaeology? *Journal of social archaeology*, vol. 1, no. 1, pp. 108–125.
- Fredengren, C. 2013. Posthumanism, the transcorporeal and biomolecular archaeology. *Current Swedish archaeology*, vol. 21, pp. 53–71.
- Fuentes, A. 2013. Blurring the biological and social in human becomings, in T. Ingold & G. Palsson (eds.), *Biosocial becomings, integrating social and biological anthropology*, pp. 42–58. Cambridge University Press, New York.
- Fuglestad, I. 2014. Declaration on behalf of an archaeology of sexe. *Journal of archaeological method and theory*, vol. 21, no. 1, pp. 46–75.
- Fujimura, J.H. 2006. Sex genes: a critical sociomaterial approach to the politics and molecular genetics of sex determination. *Signs: journal of women in culture and society*, vol. 32, no. 1, pp. 49–82.
- Geller, P. L. 2005. Skeletal analysis and theoretical complications. *World archaeology*, vol. 37, no. 4, pp. 597–609.
- Geller, P. L. 2008. Conceiving sex: fomenting a feminist bioarchaeology. *Journal of social archaeology*, vol. 8, pp. 113–138.
- Geller, P. L. 2009a. Bodyscapes, biology, and heteronormativity. *American anthropologist*, vol. 111, no. 4, pp. 504–516.
- Geller, P. L. 2009b. Identity and difference: complicating gender in archaeology. *Annual review of anthropology*, vol. 38, pp. 65–81.
- Geller, P. L. 2016. *The bioarchaeology of socio-sexual lives: queering common sense about sex, gender, and sexuality*. Springer, Switzerland.
- Geller, P. L. 2017. Brave old world, ancient DNA testing and sex determination, in S. C. Agarwal & J. K. Wesp (eds.), *Exploring sex and gender in bioarchaeology*, pp. 71–87. University of New Mexico Press, Albuquerque.
- Gero, J. M. 2007. Honoring ambiguity/problematising certitude. *Journal of archaeological method and theory*, vol. 14, no. 3, pp. 311–327.

- Gero, J. M. 2015. *Yutopian: archaeology, ambiguity, and the production of knowledge in northwest Argentina*. University of Texas Press.
- Ghisleni, L., Jordan, A. M. & Fioccaprile, E. 2016. Introduction to “binary binds”: deconstructing sex and gender dichotomies in archaeological practice. *Journal of archaeological method and theory*, vol. 23, pp. 765–787.
- Giffney, N. 2004. Denormalizing queer theory: more than (simply) lesbian and gay studies. *Feminist theory*, vol. 5, no. 1. pp. 73–78.
- Gilchrist, R. 1999. *Gender and archaeology: contesting the past*. Routledge, London.
- Glencross, B. A. 2011. Skeletal injury across the life course, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 390–409. John Wiley & Sons, Chichester.
- Grauer, A. L. & Stuart–Macadam, P. 1998. *Exploring the differences: sex and gender in paleopathological perspective*. Cambridge University Press.
- Grosz, E., 2008. Darwin and feminism: preliminary investigations for a possible alliance, in S. Alaimo (ed.), *Material feminisms*, pp. 23–51. Indiana University Press.
- Gräslund, A. 2001. The position of Iron Age Scandinavian women, in B. Arnold & N. L. Wicker (eds), *Gender and the archaeology of death*, pp. 81–102. Altamira Press, Walnut Creek.
- Götherström, A., Lidén, K., Ahlström, T., Källersjö, M., & Brown, T. A. 1997. Osteology, DNA and sex identification: morphological and molecular sex identifications of five Neolithic individuals from Ajvide, Gotland. *International Journal of Osteoarchaeology*, vol. 7, no. 1, pp. 71–81.
- Halcrow, S. E. & Tayles, N. 2011. The bioarchaeological investigation of children and childhood, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 333–360. John Wiley & Sons, Chichester.
- Hanks, B. 2008. Reconsidering warfare, status and gender in the Eurasian Steppe Iron Age, in K. M. Linduff & K. S. Robinson. (eds.), *Are all warriors male? Gender roles on the ancient Eurasian Steppe*, pp. 15–34. Altamira Press, Walnut Creek.
- Harré, R. 1991 *Physical being: a theory for a corporeal psychology*. Blackwell, Oxford.
- Haraway, D. 1988. Situated knowledges: the science question in feminism and the privilege of partial perspective. *Feminist studies*, vol. 14, no. 3, pp. 575–599.
- Harman, G. 2013. Undermining, overmining, and duomining: a critique, in J. Sutela (ed.), *ADD Metaphysics*, pp. 40–51. Aalto University Digital Design Research Laboratory.
- Harris, O.J. & Cipolla, C. 2017. *Archaeological theory in the new millennium: introducing current perspectives*. Routledge.
- Harris, O. J. & Robb, J. 2012. Multiple ontologies and the problem of the body in history. *American anthropologist*, vol. 114, no. 4, pp. 668–679.
- Haughton, M. 2018. Social relations and the local: revisiting our approaches to finding gender and age in prehistory. A case study from Bronze Age Scotland. *Norwegian archaeological review*, vol. 51, no. 1–2, pp. 64–77.
- Hays–Gilpin, K. A. 2000. Feminist scholarship in archaeology. *Annals of the American academy of political and social science*, vol. 571, pp. 89–106.
- Hays–Gilpin, K. A. 2004. *Ambiguous images. Gender and rock art*. Altamira Press, Walnut Creek.
- Hays–Gilpin, K. A. 2008. Archaeology and women’s ritual business. Belief in the past. *Theoretical approaches to the archaeology of religion*, in D. S. Whitley & K. Hays–Gilpin (eds.), pp. 247–258. Left Coast Press, Walnut Creek California.
- Hedenstierna-Jonson, C., Kjellström, A., Zachrisson, T., Krzewińska, M., Sobrado, V., Price, N., Günther, T., Jakobsson, M., Götherström, A. & Storå, J. 2017. A female

- Viking warrior confirmed by genomics. *American journal of physical anthropology*, vol. 164, no. 4, pp. 853–860.
- Hekman, S. 2008. Constructing the ballast: an ontology for feminism, in S. Alaimo (ed.), *Material feminisms*, pp. 85–119. Indiana University Press.
- Hill, E. 1998. Gender-informed archaeology: the priority of definition, the use of analog and the multivariate approach. *Journal of archaeological method and theory*, vol. 5, no. 1, pp. 99–128.
- Hird, M. J. 2004. Naturally queer. *Feminist theory*, vol. 5, no. 1, pp. 85–89.
- Hodder, I. 2014. The asymmetries of symmetrical archaeology. *Journal of contemporary archaeology*, vol. 1, no. 2, pp. 228–230.
- Hollimon, S. E. 1996. Sex, gender and health among the Chumash: an archaeological examination of prehistoric gender roles. *Proceedings of the society for California archaeology*, vol. 9, pp. 205–208.
- Hollimon, S. E. 2001a. Death, gender, and the Chumash peoples: mourning ceremonialism as an integrative mechanism. Social memory, identity, and death: anthropological perspectives on mortuary rituals, in M. S. Chesson (ed.), *Archaeological papers of the American anthropological association*, vol. 10, pp. 41–56.
- Hollimon, S. E. 2001b. Warfare and gender in the northern plains: osteological evidence of trauma reconsidered. in B. Arnold & N. L. Wicker (eds), *Gender and the archaeology of death*, pp. 179–193. Altamira Press, Walnut Creek.
- Hollimon, S. E. 2006. The archaeology of nonbinary genders in native North American societies, in S. M. Nelson (ed.), *Handbook of gender in archaeology*, pp. 435–450. Altamira Press, Walnut Creek.
- Hollimon, S. E. 2011. Sex and gender in bioarchaeological research, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 149–182. John Wiley & Sons, Chichester.
- Hollin, G., Forsyth, I., Giraud, G. & Potts, T. 2017. (Dis)entangling Barad: materialisms and ethics. *Social studies of science*, vol. 47, no. 6, pp. 918–941.
- Horn, C. 2013. Violence and virility, in S. Bergerbrandt & S. Sabatini (eds), *Counterpoint: essays in archaeology and heritage studies honour of Professor Kristian Kristiansen*, pp. 235–241. [BAR international series 2508.] Archaeopress, Oxford.
- Hughes, I. A. 2008. Disorders of sex development: a new definition and classification. *Best practice & research: clinical endocrinology & metabolism*, vol. 22, no. 1, pp. 119–134.
- Härke, H. 2000. Social analysis of mortuary evidence in German protohistoric archaeology. *Journal of anthropological archaeology*, vol. 19, pp. 369–384.
- Ingold, T. 2013. Prospect, in T. Ingold & G. Palsson (eds.), *Biosocial becomings, integrating social and biological anthropology*, pp. 1–21. Cambridge University Press, New York.
- Insoll, T. 2007. Introduction: configuring identities in archaeology, in T. Insoll (ed.), *The archaeology of identities: a reader*. Routledge, London.
- Jackes, M. 2011. Representativeness and bias in archaeological skeletal samples, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 107–146. John Wiley & Sons, Chichester.
- James, W. 1984. William James: the essential writings. State University of New York Press, Albany.
- Jaouen, K., Balter, V., Herrscher, E., Lamboux, A., Telouk, P., & Albarede, F. 2012. Fe and Cu stable isotopes in archaeological human bones and their relationship to sex. *American journal of physical anthropology*, vol. 148, no. 3, pp. 334–340.

- Jeffreys, S. 1997. Transgender activism. *Journal of lesbian studies*, vol. 1, no. 3–4, pp. 55–74.
- Jones, M. E. 2011. Gendered perspectives in archaeological narratives of the Danish Bronze Age: deconstructing the binary approach. PhD dissertation, The University of Edinburgh.
- Jordan, A. M. 2016. Her mirror, his sword: unbinding binary gender and sex assumptions in Iron Age British mortuary traditions. *Journal of archaeological method and theory*, vol. 23, no. 3, pp. 870–899.
- Jorgensen-Rideout, S. 2017. Beyond theory: queer theory in practice. *The post hole*, vol. 50, pp. 20–25, viewed 30 April 2020, <https://www.theposthole.org/read/article/37>
- Joyce, R. A. 2000. Girling the girl and boyng the boy: the production of adulthood in ancient Mesoamerica. *World archaeology*, vol. 31, no. 3, pp. 473–483.
- Joyce, R. A. 2007. Embodied subjectivity: gender, femininity, masculinity, sexuality, In L. Meskell & R. W. Preucel (eds.), *A companion to social archaeology*, pp. 82–95. Blackwell, Malden.
- Joyce, R. A. 2008. *Ancient bodies, ancient lives: sex, gender, and archaeology*. Thames & Hudson, New York.
- Joyce, R. A. 2015. Transforming archaeology, transforming materiality. *Archaeological papers of the American anthropological association*, vol. 26, no. 1, pp. 181–191.
- Joyce, R. A. 2017. Sex, gender, and anthropology: moving bioarchaeology outside the subdiscipline, in S. C. Agarwal & J. K. Wesp (eds.), *Exploring sex and gender in bioarchaeology*, pp. 1–10. University of New Mexico Press, Albuquerque.
- Ken, I. 2008. Beyond the intersection: a new culinary metaphor for race-class-gender studies. *Sociological theory*, vol. 26, no. 2, pp. 152–172.
- Kirby, V. 2008. Natural convers (at) ions: or, what if culture was really nature all along, in S. Alaimo (ed.), *Material feminisms*, pp. 214–236. Indiana University Press.
- Kohl, P.L. 1993. Limits to a post-processual archaeology (or, the dangers of a new scholasticism), in N. Yoffee, A. Sherratt & W. Ashmore (eds.), *Archaeological theory: who sets the agenda*, pp. 13–19. Cambridge University Press.
- Kolozova, K. & Joy, E. A. 2016. *After the "speculative turn": realism, philosophy, and feminism*. Punctum books.
- Kristiansen, K. 2017. The nature of archaeological knowledge and its ontological turns. *Norwegian archaeological review*, vol. 50, no. 2, pp. 120–123.
- Källén, A., Mulcare, C., Nyblom, A. & Strand, D. 2019. Archaeogenetics in popular media: contemporary implications of ancient DNA. *Current Swedish archaeology*, vol. 27, pp. 69–91.
- Lang, V. 2011. Traceless death. missing burials in Bronze and Iron Age Estonia. *Estonian journal of archaeology*, vol. 15, no. 2, pp. 109–129.
- Lappalainen 2007: Punamullan pauloissa. Kivikauden hautatutkimuksen tutkimushistoria Suomessa. *Muinaistutkija*, no. 3, pp. 2–19.
- Laqueur, T. 1992. *Making sex: body and gender from the greeks to Freud*. Harvard University Press, Cambridge.
- Lee, P.A., Houk, C.P., Ahmed, S.F. & Hughes I.A. 2006. In collaboration with the participants in the international consensus conference on intersex organized by the Lawson Wilkins pediatric endocrine society and the European society for paediatric endocrinology. 'Consensus statement on the management of intersex disorders'. *Pediatrics*, vol. 118, no. 2, pp. 488–500.
- Levy, J. E. 1999. Gender, power, and heterarchy in middle-level societies, in T. L. Sweely (ed.), *Manifesting power: gender and the interpretation of power in archaeology*, pp. 62–78. Taylor and Francis, London.

- Levy, J. E. 2006. Gender, heterarchy and hierarchy, in S. M. Nelson (ed), *Handbook of gender in archaeology*, pp. 219–246. Altamira Press, Walnut Creek.
- Lindeberg, M. 1997. Gold, gods and women. *Current Swedish archaeology*, vol. 5, pp. 99–110.
- Linduff, K. M. & Robinson, K. S. 2008. *Are all warriors male?: gender roles on the ancient Eurasian Steppe*. Altamira Press, Walnut Creek.
- Ludvig, A. 2006. Differences between women? Intersecting voices in a female narrative. *European journal of women's studies*, vol. 13, no. 3, pp. 245–258.
- Marshall, Y. & Alberti, B. 2014. A matter of difference: Karen Barad, ontology and archaeological bodies. *Cambridge archaeological journal*, vol. 24, no. 1, pp. 19–36.
- Martinez Dy, A., Martin, L. & Marlow, S. 2014. Developing a critical realist positional approach to intersectionality. *Journal of critical realism*, vol. 13 no. 5, pp. 447–466.
- Matić, U. 2012. To queer or not to queer? That is the question: sex/gender, prestige and burial no. 10 on the Mokrin necropolis. *Dacia NS*, no. 56, pp. 169–185.
- Matić, U. 2016. (De) queering Hatshepsut: binary bind in archaeology of Egypt and kingship beyond the corporeal. *Journal of archaeological method and theory*, vol. 23, no. 3, pp. 810–831.
- McCall, L. 2005. The complexity of intersectionality. *Signs: journal of women in culture and society*, vol. 30, no. 2, pp. 1771–1800.
- McPhail, B. A. 2004. Questioning gender and sexuality binaries. *Journal of gay & lesbian social services*, vol. 17, no. 1, pp. 3–21.
- Meskel L. 2000. Cycles of life and death: narrative homology and archaeological realities. *World archaeology*, vol. 31, no. 3, pp. 423–441.
- Monro, S. 2005. Beyond male and female: poststructuralism and the spectrum of gender. *International journal of transgenderism*, vol. 8, no. 1, pp. 3–22.
- Moral, E. 2016. Qu(e)rying sex and gender in archaeology: a critique of the “third” and other sexual categories. *Journal of archaeological method and theory*, vol. 23, no. 3, pp. 788–809.
- Naples, N. A. 2009. Teaching intersectionality intersectionally. *International feminist journal of politics*, vol. 11, no. 4, pp. 566–577.
- Nelson, S. M. 2006. Archaeological perspectives on gender, in S. M. Nelson (ed.), *Handbook of gender in archaeology*, pp. 1–27. Altamira Press, Walnut Creek.
- Osgood, R. 1998. *Warfare in the late Bronze Age of North Europe*. [BAR international series 694.] Archaeopress, Oxford.
- Oyewumi, O. 1998. De-confounding gender: feminist theorizing and western culture, a comment on Hawkesworth's “Confounding gender.” *Signs*, vol. 23, no. 4, pp. 1049–1062.
- Palsson, G. 2013. Ensembles of biosocial relations, in T. Ingold & G. Palsson (eds.), *Biosocial becomings, integrating social and biological anthropology*, pp. 22–41. Cambridge University Press, New York.
- Pearson, M. P. 1999. *The archaeology of death and burial*. Sutton, Phoenix Mill.
- Pinto, R. & Pinto, L. C. 2013. Transgendered archaeology: the galli and the Catterick transvestite, in A. Bokern, M. Bolder-Boos, S. Krmnicek, D. Maschek and S. Page (eds.), *TRAC: Theoretical Roman archaeology journal*, pp. 169–181. Oxbow Books, Oxford.
- Preston-Werner, T. 2008. Breaking down binaries: gender, art, and tools in ancient Costa Rica. *Archaeological papers of the American anthropological association*, vol. 18, no. 1, pp. 49–59.

- Prince, V. 2005. Sex vs. gender. *International journal of transgenderism*, vol. 8, no. 4, pp. 29–32.
- Ramirez-Goicoechea, E. 2013. Life-in-the-making: epigenesis, in T. Ingold & G. Palsson (eds.), *Biosocial becomings: integrating social and biological anthropology*, pp. 59–83. Cambridge University Press, New York.
- Reis, E. 2009. *Bodies in doubt: an American history of intersex*. JHU Press.
- Richardson, S. S. 2013. *Sex itself: the search for male and female in the human genome*. University of Chicago Press, Chicago.
- Robert, N. 2014. Getting intersectional in museums. *Museums & social issues*, vol. 9 no. 1, pp. 24–33.
- Rosario, V. A. 2009. Quantum sex: intersex and the molecular deconstruction of sex. *GLQ: a journal of lesbian and gay studies*, vol. 15, no. 2, pp. 267–284.
- Rubio, S. L. 2011. Gender thinking in the making: feminist epistemology and gender archaeology. *Norwegian archaeological review*, vol. 44, no. 1, pp. 21–39.
- Sanz, V. 2017. No way out of the binary: a critical history of the scientific production of sex. *Signs: journal of women in culture and society*, vol. 43, no. 1, pp. 1–27.
- Sehgal, M. 2014. Diffractive propositions: reading Alfred North Whitehead with Donna Haraway and Karen Barad. *Parallax*, vol. 20, no. 3, pp. 188–201.
- Skoglund, P., Storå, J., Götherström, A. & Jakobsson, M. 2013. Accurate sex identification of ancient human remains using DNA shotgun sequencing. *Journal of archaeological science*, vol. 40, no. 12, pp. 4477–4482.
- Sofaer, J. 2006. *The body as material culture: a theoretical osteoarchaeology*. Cambridge University Press, Cambridge.
- Sofaer, J. 2009. Gender, bioarchaeology and human ontogeny, in R. Gowland & C. Knüsel (eds.), *The social archaeology of human remains*, pp. 155 – 167. Oxbow Books, Oxford.
- Sofaer, J. 2011. Towards a social bioarchaeology of age, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 285–311. John Wiley & Sons, Chicester.
- Sosna, D., Galeta, P. & Sládek, V. 2008. A resampling approach to gender relations: the Rebešovice cemetery. *Journal of archaeological science*, vol. 35, no. 2, pp. 342–354.
- Spencer-Wood, S. M. 2011. Introduction: feminist theories and archaeology. *Journal of the world archaeological congress*, pp. 1–33.
- Stefanović, S., & Porčić, M. 2013. Between-group differences in the patterning of musculo-skeletal stress markers: avoiding confounding factors by focusing on qualitative aspects of physical activity. *International journal of osteoarchaeology*, vol. 23, no. 1, pp. 94–105.
- Stewart, N. A., Gerlach, R. F., Gowland, R. L., Gron, K. J. & Montgomery, J. 2017. Sex determination of human remains from peptides in tooth enamel. *Proceedings of the national academy of sciences*, vol. 114, no. 52, pp. 13649–13654.
- Stockett, M. K. 2005. On the importance of difference: re-envisioning sex and gender in ancient Mesoamerica. *World archaeology*, vol. 37, no. 4, pp. 566–578.
- Stratton, S. 2016. “Seek and you shall find.” How the analysis of gendered patterns in archaeology can create false binaries: a case study from Durankulak. *Journal of archaeological method and theory*, vol. 23, pp. 854–869.
- Stryker, S. & Currah, P. 2014. General editor’s introduction. Decolonizing the transgender imaginary, in A. Z. Aizura, T. Cotten, C. Balzar, C. LaGata, M. Ochoa & S. Vidal-Ortiz (eds.), *Transgender studies quarterly*, vol. 1, no. 3, pp. 303–307. Duke University Press.

- Stutz, L. N. 2010. The way we bury our dead. Reflections on mortuary ritual, community and identity at the time of the Mesolithic–Neolithic transition. *Documenta Praehistorica XXXVII*, pp. 33–42.
- Ståhl, O., Tham, M. & Holtorf, C. 2017. Towards a post-anthropocentric speculative archaeology (through design). *Journal of contemporary archaeology*, vol. 4, no. 2, pp. 238–246.
- Sørensen, T. F. 2016. In praise of vagueness: uncertainty, ambiguity and archaeological methodology. *Journal of archaeological method and theory*, vol. 23, pp. 741–763.
- Sørensen, T. F. 2017a. The two cultures and a world apart: archaeology and science at a new crossroads, *Norwegian archaeological review*, vol. 50, no. 2, pp. 101–115.
- Sørensen, T. F. 2017b. Archaeological paradigms: pendulum or wrecking ball? *Norwegian archaeological review*, vol. 50, no. 2, pp. 130–134.
- Thedéén, S. 2003. Life course practices in bronze age landscapes of east central Sweden. Beyond divine chiefs and neodiffusionism. *Current Swedish archaeology*, vol. 11, pp. 97–118.
- Thrane, H. 2013. The Bronze age by region: Scandinavia, in H. Fokkens & A. Harding (eds.), *The Oxford handbook of the European Bronze Age*, pp. 746–766. Oxford University Press, Oxford.
- Vodanović, M., Demo, Ž., Njemirovskij, V., Keros, J., & Brkić, H. 2007. Odontometrics: a useful method for sex determination in an archaeological skeletal population? *Journal of archaeological science*, vol. 34, no. 6, pp. 905–913.
- Voss, B. L. 2000. Feminisms, queer theories, and the archaeological study of past sexualities. *World archaeology*, vol. 32, no. 2, pp. 180–192.
- Voss, B. L. & Schmidt, R. A. 2000. Archaeologies of sexuality: an introduction, in R. A. Schmidt & B. L. Voss (eds.), *Archaeologies of sexuality*, pp. 1–32. Routledge, London.
- Walby, S., Armstrong, J. & Strid, S. 2012. Intersectionality: multiple inequalities in social theory. *Sociology*, vol. 46, no. 2, pp. 224–240.
- Walker, P. L. & Cook, D. C. 1998. Brief communication: gender and sex: vive la difference. *American journal of physical anthropology*, vol. 106, no. 2, pp. 255–259.
- Wedgwood, N. 2009. Connell's theory of masculinity – its origins and influences on the study of gender. *Journal of gender studies*, vol. 18, no. 4, pp. 329–339.
- Weed, E. 2011. From the “useful” to the “impossible” in the work of Joan W. Scott, in J. Butler & E. Weed (eds.), *The question of gender. Joan W. Scott's critical feminism*, pp. 289–311. Indiana University Press.
- Weismantel, M. 2013. Towards a transgender archaeology: queer rampage through prehistory, in S. Stryker & A. Z. Aizura (eds.), *The Transgender studies reader 2*, pp. 319–334. Routledge, New York.
- Weiss–Krejci, E. 2011. The formation of mortuary deposits, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 68–106. John Wiley & Sons, Chichester.
- Wesp, J. K. 2017. Embodying sex/gender systems in bioarchaeological research, in S. C. Agarwal & J. K. Wesp (eds.), *Exploring sex and gender in bioarchaeology*, pp. 99 – 126. University of New Mexico Press, Albuquerque.
- Whitehead, A. N. 2013. *The concept of nature*. Courier Corporation, Dover edition reprint. Originally published by Cambridge University Press in 1920.
- Whitley, J. 2002. Objects with attitude: biographical facts and fallacies in the study of late Bronze Age and early Iron Age warrior graves. *Cambridge archaeological journal*, vol. 12, no. 2, pp. 217–232.

- Wilkie, L. A. & Hayes, K. H. 2006. Engendered and feminist archaeologies of the recent and documented pasts. *Journal of archaeological research*, vol. 14, no. 3, pp. 243–264.
- Williamson, K. J. 2011. Inherit my heaven: kalaallit gender relations. *INUSSUK – Arctic research journal*, vol. 1. AKA Print A/S, Århus, 2 edition.
- Witmore, C. 2014. Archaeology and the new materialisms. *Journal of contemporary archaeology*, vol. 1, no. 2, pp. 203–246.
- Wylie, A. 1993. A proliferation of new archaeologies: “beyond objectivism and relativism”, in N. Yoffee, A. Sherratt & W. Ashmore (eds.), *Archaeological theory: who sets the agenda*, pp. 20–26. Cambridge University Press.
- Wylie, A. 1997. The engendering of archaeology: refiguring feminist science studies. *New directions*, vol. 12, pp. 80–99.
- Wylie, A. 2007. Doing archaeology as a feminist: introduction. *Journal of archaeological method and theory*, vol. 14, pp. 209–216.
- Yoffee, N. & Sherratt, A. 1993. Introduction: the sources of archaeological theory, in N. Yoffee, A. Sherratt & W. Ashmore (eds.), *Archaeological theory: who sets the agenda*, pp. 1–9. Cambridge University Press.
- Zuckerman, M. K. 2017. Mercury in the midst of Mars and Venus: reconstructing gender, sexuality, and socioeconomic status in relation to mercury treatment for syphilis in seventeenth – to nineteenth-century London. in S. C. Agarwal & J. K. Wesp (eds.), *Exploring sex and gender in bioarchaeology*, pp. 223–254. University of New Mexico Press, Albuquerque.
- Zuckerman, M.K. & Armelagos, G.J. 2011. The origins of biocultural dimensions in bioarchaeology, in S. C. Agarwal & B. A. Glencross (eds.), *Social bioarchaeology*, pp. 15–43. John Wiley & Sons, Chichester.